

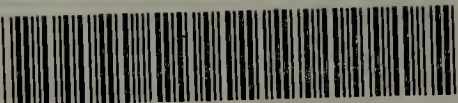




Presented by

The Medical Officer of Health

August 1931



22501418686

PORT-OF-SPAIN CITY COUNCIL.



ANNUAL REPORT

ON THE

Vital Statistics, Sanitary Condition and Sanitary
Administration

OF THE

Urban Sanitary District of the City of Port-of-Spain

FOR THE YEAR 1930

BY

GEORGE H. MASSON, M.D., C.M., D.Sc. (Public Health), F.R.C.P.E., F.R.S.E.,
Medical Officer of Health.

*With the Compliments of
Dr. GEORGE H. MASSON,
Medical Officer of Health,
Port-of-Spain, Trinidad, B.W.I.*

TRINIDAD :
PRINTED BY THE GOVERNMENT PRINTER,
GOVERNMENT PRINTING OFFICE,
PORT-OF-SPAIN.

1931.

1315 12 11 13 11

WELLCOME
LIBRARY
Am. Lib.
WA 22
. G T 7
p 84
1930

Local Authority in the Urban Sanitary District of the City of Port-of-Spain.

1929-30.

The City Council

HIS WORSHIP THE MAYOR (ALDERMAN THE HON. A. A. CIPRIANI).

Deputy-Mayor :

ALDERMAN H. A. DE FREITAS.

Aldermen :

F. E. SCOTT, O.B.E., J.P.

H. J. VIEIRA, V.D.

HON. GASTON JOHNSTON, K.C.

Councillors :

DR. T. P. ACHONG.

M. A. MAILLARD.

C. G. ARCHIBALD.

R. M. T. PRIZGAR.

E. W. BOWEN.

A. RICHARDS.

V. GORMANDY.

M. RIGSBY.

D. M. HAHN, O.B.E.

CAPT. A. CLAYTON-SMITH, M.C.

J. E. LAI-FOOK.

W. F. STODART.

J. S. DAYANAND MAHARAJ.

L. G. THOMAS.

J. M. THORNE.

PORT-OF-SPAIN CITY COUNCIL.

Annual Report of the Medical Officer of Health, 1930.

TABLE OF CONTENTS.

SECTION I.

PAGE.

VITAL STATISTICS.

Short summary of vital statistics ; area of City ; mean population ; density of population ; natural increase of population ; sectional distribution of population ; births and birth-rates ; deaths and death-rates from all causes ; defective form of death certificates ; value of correcting death-rates ; removal of House of Refuge ; deaths from House of Refuge ; unusually low death-rate ; meaning of a "corrected death-rate" ; still-births and still birth-rates ; infant mortality—number of deaths under 1 year, rates, outstanding causes, deaths under 1 year from notifiable infectious diseases, period of survival of infants under 1 year ; deaths at ages 1-5 ; summary of causes of deaths in 1-5 age group	1
NOTIFIABLE INFECTIOUS DISEASES.—Notifiable and quarantinable diseases ; number of cases notified ; increases and declines in notifications ; deaths from notifiable diseases ; increases and decreases in deaths from notifiable diseases ; deaths in hospital from notifiable diseases	4
NON-NOTIFIABLE INFECTIOUS DISEASES.—Particulars of deaths ; influenza ; malaria ; syphilis ; dysentery ; whooping cough ; ankylostomiasis ; influenza—prevalence of severe and disabling type, distribution of deaths ; malaria—problem of out districts, no anopheles breeding places within the City, malarialogist's opinion ; syphilis—deaths and death-rates, decline of incidence, work of free venereal diseases clinic and Child Welfare League bearing good fruit ; dysentery—incidence, deaths ; whooping cough—absence of mortality ; ankylostomiasis—not a City problem, all premises provided with privy accommodation	5
PRINCIPAL INFECTIOUS DISEASES.—Pulmonary Tuberculosis, deaths and death-rates, decline in notifications, preventive campaign by Tuberculosis Association, Dispensary linked with Tuberculosis ward ; enteric fever—general rise in the Colony, deaths and death-rates, effect of purification of water supply, sources of infection other than water : common house fly, contact with patients, unboiled milk, greens, shell fish, carriers, anti-typhoid inoculation recommended	5
OTHER PRINCIPAL CAUSES OF DEATH.—Cardiac and vascular diseases—deaths and death-rates, removal of House of Refuge to Mucurapo, necessity for corrected death-rates, comparison of deaths and death-rates for 13 years, 1918-1930 ; Bright's disease and nephritis—comparison of deaths for this and previous years, third place on list of principal killing diseases maintained ; diarrhoeal diseases—monthly incidence of deaths, deaths and death-rates, deaths under 1 year and in the age period 1-5 years, prevalence in dry and wet season subverted ; bronchitis—decline in deaths, deaths and death-rates, highest number of deaths in respiratory group, deaths under 1 year and at 1-5 years ; pneumonia—deaths under 1 year and at 1-5 years ; cancer and other malignant diseases—lowest number of deaths since 1917, deaths and death-rates for 13 years, 1918-1930, early diagnosis and treatment most effective means of prevention, information published by the American Society for the Control of Cancer ...	9
CHARTS.—Chart A. Showing curve of infant mortality for 14 years, 1917-1930 Do. B. Showing curves of notifications and deaths from Pulmonary Tuberculosis for 13 years, 1918-1930. Do. C. Contrasting curves of notifications and deaths from Enteric Fever during 1918-1923, before chlorination of water supply, and during 1924-1930, after chlorination. Do. D. Contrasting the curves of deaths from Pulmonary Tuberculosis and Cardiac and Vascular Diseases for 11 years, 1920-1930. Do. E. Contrasting curves of Diarrhoea and Enteritis and Enteric Fever for 13 years, 1918-1930.	

SECTION II.

SANITARY CONDITIONS.

RAINFALL.—Amount gauged and seasonal distribution, comparison with records of preceding year	11
MILK.—Dairy and cowshed licenses comparison with figures for previous year ; milk vendor's licences and badges in Port-of-Spain and out districts ; situation of dairies ; amendment of Sale of Milk bye-laws ; tuberculin testing of dairy cattle... ..	12
FOOD.—Sale of foodstuffs bye-laws required ; insanitary ice cream carts ; control of manufacture of aerated waters tightened ; prohibition of use of patent and other unapproved bottles	12
WATER SUPPLY.—Filters at St. Clair	13
DRAINAGE.—Improved drainage in Woodbrook ; paving of bed of Dry River ; flooding in O'Brien Place, Prescott Alley, Essex Place, Plaisance Road and Valley Road ...	13
SEWERAGE AND SEWAGE DISPOSAL.—Satisfactory functioning of sewerage system ; defective method of disposal of faecal matter from unsewered parts of City	13

REMOVAL AND DISPOSAL OF HOUSE REFUSE.—Necessity for scavenging on Sunday mornings in lower portion of City ; need for correlation between scavenging and dumping near boundaries of City ; sanitary condition of western dump	14
HOUSING.—No abatement of overcrowding ; improved housing for working classes	14
LEGISLATION.—Public Health (Amendment) Ordinance No. 4 of 1930	14
GENERAL PROGRESS.—Abolition of Dry River nuisance commenced ; powers acquired to improve sanitary conditions of barracks or common lodging houses ; housing scheme ; workers' homes	15

SECTION III.

SANITARY ADMINISTRATION.

STAFF.—Medical Officer of Health ; clerks ; sanitary and assistant sanitary inspectors ; rat gangs ; oilers of pools and drains ; sprayers of cesspits ; spraymen for disinfecting premises for infectious disease and vermin ; supervisor of scavenging and cleansing of Eastern Market	15
SANITARY WORK.—House to house inspection ; results of notices and verbal directions ; disinfection of premises for infectious diseases and vermin ; oiling of cesspits ; lime-washing of common lodging houses, barracks, bakehouses, kitchens, retail shops, stables, parlours, aerated water factories, tanneries and other places ; destruction of rats and mice ; bacteriological examination for plague ; anti-mosquito work ; house to house inspection of eaves gutters, down pipes and other breeding places of mosquitoes ; oil for spraying pools and swamps ; reports by sanitary inspectors of leaks, chokes and broken fittings in water service and sewerage system	16
UNSOOUND FOOD.—Articles seized and destroyed	17
PROSECUTIONS.—Informations laid ; fines	17
OBSERVANCE OF HEALTH WEEK.—Programme ; report of Committee	17
REPORTS.—Regular reports ; special reports ; reports on plans of buildings, applications for leases of land in Woodbrook and notices of repairs to buildings ; bye-laws submitted...	21
MEETINGS.—Regular meetings of local authority ; ordinary and special meetings of the City Council ; Committee meetings	21
FINANCIAL.—Revenue ; expenditure	21
LEAVE OF ABSENCE.—Vacation leave ; sick leave	22
ACKNOWLEDGMENTS.—Local authority ; Deputy Surgeon-General ; Dr. A. J. R. O'Brien ; staff of department	22

SECTION IV.

APPENDICES.

Appendix A.—Vital Statistics.

TABLE I.—Summary of vital statistics for 1925 to 1930	23
Do. II.—Monthly births and birth-rates	24
Do. III.—Monthly deaths and death-rates	24
Do. IV.—Deaths at different age periods	25
Do. V.—Deaths of non-residents at the Colonial Hospital	25
Do. VI.—Classification of causes of death	26
Do. VII.—Monthly still-births and rates per 100 live-births	26
Do. VIII.—Causes of death of infants under 1 year	27
Do. IX.—Deaths of children from 1 to 5 years	28
Do. X.—Infectious diseases notified under the Public Health Ordinance	29
Do. XI.—Deaths from notifiable infectious diseases	29
Do. XII.—Distribution of cases and deaths from notifiable infectious diseases	29
Do. XIII.—Deaths in Hospital from notifiable infectious diseases	30
Do. XIV.—Comparing Deaths in Hospital with Deaths at Home from notifiable infectious diseases	30
Do. XV.—Deaths from non-notifiable infectious diseases	30
Do. XVI.—Deaths in Hospital from non-notifiable infectious diseases	31
Do. XVII.—Comparing Deaths in Hospital with Deaths at Home from non-notifiable infectious diseases	31
Do. XVIII.—Deaths from diarrhoea and enteritis	31

Appendix B.—Sanitary Conditions.

TABLE XIX.—Rainfall at three stations in Port-of-Spain, 1930...	31
Do. XX.—Rainfall at three stations in Port-of-Spain, 1929...	31

Appendix C.—Sanitary Works.

TABLE A.—Inspection of premises, &c., by sanitary inspectors	32
Do. B.—Results of notices and verbal directions	34
Do. C.—Premises disinfected for infectious diseases and vermin	35
Do. D.—Railway coaches disinfected	35
Do. E.—Cesspits sprayed with crude and distillate oil (free)	35
Do. F.—Limewashing	35
Do. G.—Destruction of rats and mice	36
Do. H.—Examination of rats by Government Bacteriologist	36
Do. J.—Inspection of eaves gutters, &c.	36
Do. K.—Reports to Water and Sewerage Department by sanitary inspectors	36
Do. L.—Cases determined by City Magistrates and penalties imposed	37

URBAN SANITARY DISTRICT OF THE CITY OF PORT-OF-SPAIN.

Report of the Medical Officer of Health for the Year 1930.

SECRETARY, LOCAL AUTHORITY.

SIR,

I have the honour to submit for the information of the Local Authority the following Annual Report on the vital statistics, sanitary condition and sanitary administration of the Urban Sanitary District of the City of Port-of-Spain for the year 1930.

I.—VITAL STATISTICS.

Short Summary.

Area of City	...	...	...	...	...	...	...	1,514 acres.
Mean Population	...	...	...	...	...	...	...	68,703
Density of Population	...	...	...	...	...	...	...	45·3 persons per acre.
Total live-births	...	...	...	...	...	...	...	1,935
Birth-rate per 1,000 population	...	...	...	...	...	...	...	28·16
Average Birth-rate for previous five years	...	...	...	...	...	...	...	27·88
Total Deaths	...	...	...	...	...	...	...	1,308
Death-rate per 1,000 population	...	...	...	...	...	...	...	19·00
Average Death-rate for previous five years	...	...	...	...	...	...	...	22·73
Natural increase of population	...	...	...	...	...	...	...	627
Natural increase of population—average for previous five years	...	...	...	...	...	...	...	339
Total deaths under one year	...	...	...	...	...	...	...	233
Infant Mortality (Rate per 1,000 live-births)	...	...	...	...	...	...	...	120·41
Average Infant Mortality for previous five years	...	...	...	...	...	...	...	141·10
Total Still-births (Dead-born infants)	...	...	...	...	...	...	...	138
Still birth-rate (Dead-born infants per cent. of registered live-births)	...	...	...	...	...	...	...	7·13
Average Still-birth rate for previous five years	...	...	...	...	...	...	...	8·14
Notifiable Infectious Diseases—Death-rate per 1,000 population	...	...	...	...	...	...	...	3·36
Notifiable Infectious Diseases—Average death-rate for previous five years	...	...	...	...	...	...	...	3·64
Cardiac and Vascular Diseases—Death-rate per 1,000 population	...	...	...	...	...	...	...	2·82
Pulmonary Tuberculosis	...	do.	do.	...	...	...	...	2·05
Bright's Disease and Nephritis	...	do.	do.	...	...	...	...	1·37
Bronchitis	...	...	do.	do.	...	...	...	0·98
Diarrhoea and Enteritis	...	...	do.	do.	...	...	...	0·84
Pneumonia and Broncho-pneumonia	...	do.	do.	...	...	...	...	0·80
Malaria	...	...	do.	do.	...	...	...	0·58
Cancer and other Malignant Diseases	...	do.	do.	...	...	...	...	0·48
Syphilis	...	...	do.	do.	...	...	...	0·44
Tuberculosis (non-pulmonary)	...	do.	do.	...	...	...	...	0·23
Enteric Fever	...	...	do.	do.	...	...	...	0·23
Dysentery	...	...	do.	do.	...	...	...	0·16
Influenza	...	...	do.	do.	...	...	...	0·13
Ankylostomiasis	...	...	do.	do.	...	...	...	0·10

The principal causes of death for the quinquennial period 1925-1929 are summarised in Table I and compared with the corresponding figures for 1930.

Population.—The mean population of the City in the Census year, 1921, was found to be 61,836. As estimated to the middle of 1930, the total inhabitants numbered 68,703. These figures show an increase during the decennium 1921-1930 of 6,867.

The natural increase of the population in 1930, *i.e.*, the excess of live-births over deaths, was unusually high, being 627, compared with 392 in 1929 and an average of 339 for the preceding quinquennium 1925-1929.

The distribution of the population in the several sub-districts of the City was departmentally estimated to be approximately as follows:—

City	...	...	...	...	...	27,972
St. Clair	...	...	...	...	...	1,290
East Dry River	...	...	...	...	...	16,623
Belmont	...	...	...	...	...	13,139
Woodbrook	...	...	...	...	...	9,679

Calculated on an area of 1,514 acres the density of the population was 45·3 per acre, compared with 47·6 for the City of Georgetown in British Guiana.

The estimates of population obtained from the Registrar-General in intercensal periods form an indispensable working basis for determining the birth and death-rates of the City, but there are many difficulties in the way of ensuring their strict accuracy, and there is reason to believe that when the Census comes to be taken next year the population of Port-of-Spain will be found to have increased considerably more than is indicated by the latest estimates.

Births and Birth-rates.—The total live-births registered during the year was 1,935, of which 964 were boys, and 971, or an excess of 7, were girls. This was a reversal of the condition which obtained last year when the male exceeded the female births by 75. The birth-rate was 28·16 per 1,000 of the population, compared with 28·13 last year and an average of 27·88 for the preceding five years, 1925-1929.

Table II shows the births and birth-rates for each month during the year.

Deaths and Death-rates.—The total number of deaths registered from all causes was 1,308, being fewer by 627 than the total births. The sex distribution, like the births, was almost evenly divided, being males 656 and females 652. The death-rate per 1,000 of the population was 19, as against 22·31 in 1929, and an average of 22·73 for the preceding five years. These figures include the deaths of many persons not ordinarily resident in the City, and the writer again begs to draw the attention of the Local Authority to the necessity, as an aid to the compilation of "corrected" death-rates, for taking steps to have the existing form of death certificate amended to provide for including in the certificate particulars of the last permanent place of abode of a deceased person.

A clear instance of the value of correcting death-rates is the wrong impression which would be created in respect of the City's unusually low death-rate this year of 19 per 1,000 if the removal of the House of Refuge to a registration district outside of Port-of-Spain were not taken into account. For the last three quarters of the year deaths in that institution, which is now situated in St. James, were registered in Mucurapo. In 1929 the number of these deaths, most of them due to chronic diseases associated with old age, was 142, and the average number for the preceding five years was 159.

Deaths at the House of Refuge for the first quarter are included in the total deaths registered in the City for 1930, but a correction for the mortality in respect of the last three quarters of the year, which was not registered in Port-of-Spain, is necessary before the total death-rate can be compared with that of last year and other preceding years. But even after making allowance for this correction the death-rate for the year still remains unusually low.

There are other ways in which the death-rate of a district may be usefully "corrected".

The Medical Officer of Health for the London Borough of St. Marylebone dealing with this subject in his Annual Report for 1929, explains that :—

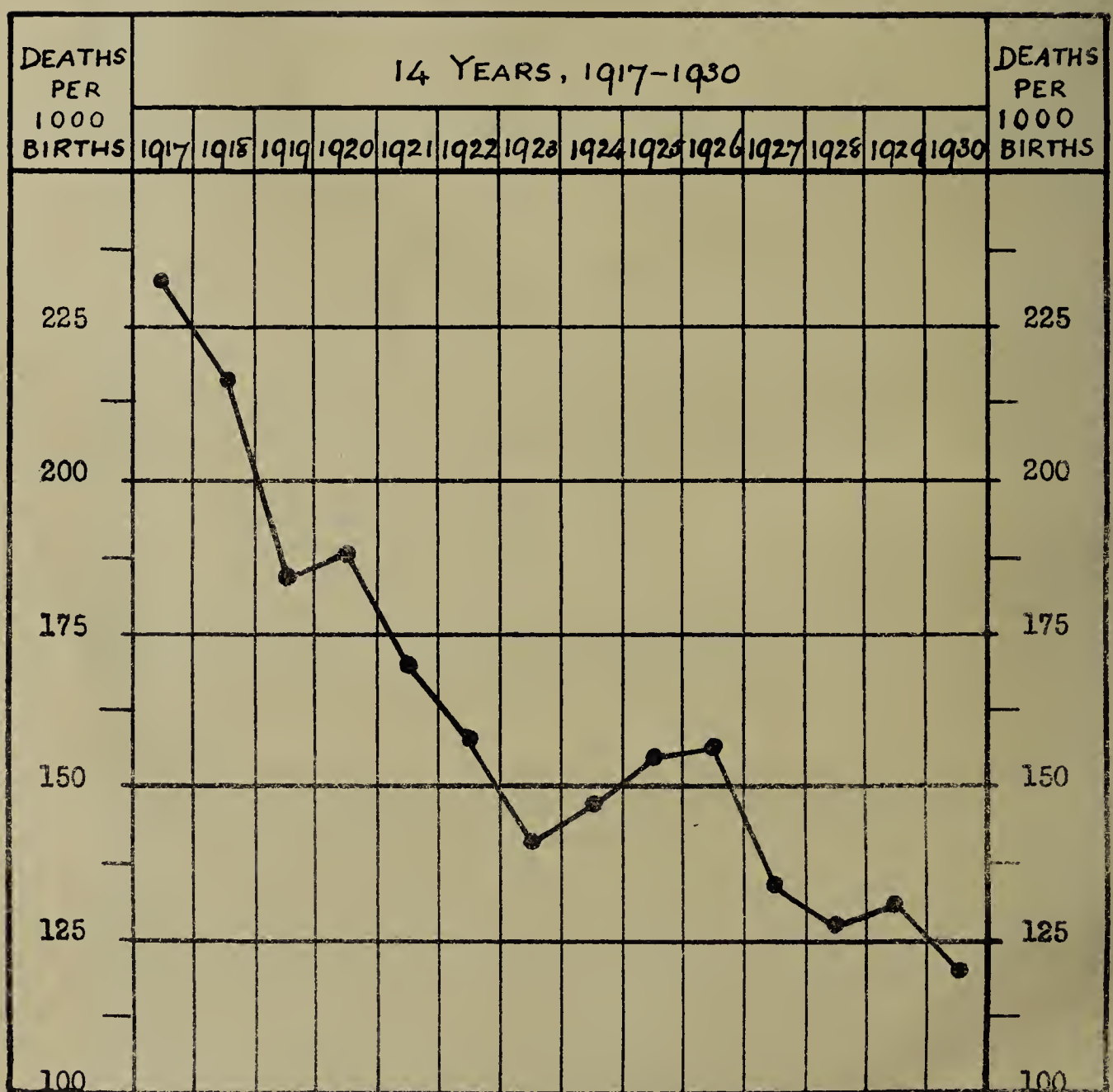
By "a corrected death-rate" is meant one which has been treated in such a way, raised or lowered in a certain ratio, as to be comparable with the death-rates similarly treated of other districts. That "correction" is necessary is due to the fact that differences in death-rates in various areas are not entirely dependent upon the sanitary conditions existing in these areas, but also on the constitution (age and sex) of the population. A population consisting of aged persons would show more deaths than one consisting entirely of young and vigorous adults; a population made up of a large number of males and a small number of females has more deaths and a higher death-rate than one in which the females outnumber the males. The death-rates of such populations are not comparable one with the other, nor with those of populations differently constituted. To overcome this difficulty the Registrar-General issues a "factor for correction" for each district which represents the number of times which the actual death-rate of each must be raised in order to permit of its examination side by side with the rates of other districts. The "factor for correction" in the case of St. Marylebone in 1929 is 0·944, and the corrected death-rate is obtained by multiplying with this figure the number of deaths per 1,000, calculated from the total deaths and the population estimated to the middle of the year.

A monthly statement of deaths and death-rates, together with the sex distribution, is given in Table III. Table IV shows the deaths of males and females at different age periods, the figures for the extremes of life showing that 233 babies died under one year of age and 322 adults died over 60, while deaths of

CHART A.

INFANT MORTALITY RATE

Port-of-Spain.



children 1-5 years of age numbered 67. Table V shows the deaths of non-residents at the Colonial Hospital from month to month. A summary of the principal causes of death is given in Table I and a classification of deaths from all causes appears in Table VI.

A monthly statement of deaths from notifiable infectious diseases is given in Table XI and a similar statement of deaths from non-notifiable infectious diseases is shown from month to month in Tables XIII and XVI, respectively. Table XII compares the distribution of cases and deaths from notifiable infectious diseases in the sub-districts of the City, and comparisons of deaths at home and deaths in hospital from notifiable and non-notifiable infectious diseases are, respectively, shown in Tables XIV and XVII. Deaths from Diarrhoea and Enteritis each month appear in Table XVIII.

Still-Births.—The total number of still-births, or dead-born infants, was 138. The still-birth rate of a district is the number of dead-born infants per cent. of the registered live-births. This year the still birth rate of the City was 7.13, compared with 8.34 in the preceding year and an average of 8.14 for the previous five years. This novel decrease in the still-birth rate should be an encouragement to those engaged in the pre-natal and maternity work of the Child Welfare League in Port-of-Spain.

INFANT MORTALITY.

By infant mortality rate is meant the number of deaths of infants under one year of age during the year per 1,000 live-births registered. This year the total deaths under one year in the City was 233, of which 128 were boys and 105 girls; the live-births registered totalled 1,935, hence the infant mortality rate was 120.41, which was the lowest yet recorded and a decline of 11.52 on the rate for the preceding year, also of 20.69 on the average for the preceding quinquennium. The infant mortality rates for the period of 14 years 1917-1930 are tabulated below and graphically shown in Chart A.

Infant Mortality Rates for 14 years, 1917-1930

Year.				Infant mortality rate.	Year.				Infant mortality rate.
1917	..	..	..	232.77	1924	..	..	..	147.09
1918	..	..	..	216.19	1925	..	..	..	154.95
1919	..	..	..	184.91	1926	..	..	..	156.57
1920	..	..	..	188.23	1927	..	..	..	134.63
1921	..	..	..	170.12	1928	..	..	..	127.41
1922	..	..	..	157.89	1929	..	..	..	131.93
1923	..	..	..	141.58	1930	..	..	..	120.41

The causes of deaths of infants under one year of age for this and the previous year are detailed in Table VIII, the most outstanding diseases being congenital debility, prematurity, gastro-enteritis, marasmus, bronchitis, diarrhoea, malnutrition, pneumonia and broncho-pneumonia which were together responsible for 74 deaths, as against 73 deaths from the same causes in 1929.

There were only 11 deaths at this age from notifiable infectious disease, one being from acute anterior poliomyelitis, an unusual infection in the city, another from tubercular meningitis and 9 from pneumonia. In the previous year deaths from pneumonia numbered 14. There was an increase in deaths from diarrhoea and enteritis, including colitis, from 37 in the preceding year to 45 in this. There were only 2 deaths from dysentery, compared with four in 1929.

An analysis of the period of survival of infants who died under one year is given below in tabular form.

This statement shows that of the total infant mortality of 233 deaths, 21 babies did not survive a day. Forty died from one day to less than one week old; 19 from one week to under two weeks and 12 between two weeks and a month. Forty succumbed between the first and second months of life, and the total number that failed to live beyond three months was 152—85 boys and 67 girls—or 62.23 of the entire infant mortality.

It may be that the increased accommodation about to be provided for maternity cases at the Colonial Hospital will result in a gradual decline of the high proportion of babies who die on the first day or within the first fortnight of their lives. Should this prove to be so, the writer ventures to express the hope that the maternity ward will at no distant time develop into a distinct maternity hospital placed for choice among the poor in the lower part of the City and to the erection and maintenance of which local philanthropy and the local authority might fittingly contribute.

Survival Period of Infants dying under 1 year of age.

Period of Life.	Males.	Females.	Both Sexes.
Under 1 day	12	9	21
1 day to under 1 week	25	15	40
1 week to under 2 weeks	9	10	19
2 weeks to under 3 weeks	5	4	9
3 weeks to under 1 month .. .. .	..	3	3
1 month to 2 months	20	20	40
Over 2 months to 3 months	14	6	20
Over 3 do. 4 do.	10	7	17
Over 4 do. 5 do.	4	8	12
Over 5 do. 6 do.	7	2	9
Over 6 do. 7 do.	3	5	8
Over 7 do. 8 do.	5	3	8
Over 8 do. 9 do.	5	4	9
Over 9 do. 10 do.	6	6	12
Over 10 do. 11 do.	3	3	6
Over 11 do. under 1 year .. .. .	..	..	..
	128	105	233

DEATHS AT AGES 1-5.

Deaths from all causes in the age period 1-5 years numbered 67, of which 30 were boys and 37 girls, compared with a total of 96 deaths in 1929, and an average of 101 for the preceding four years. The principal causes of death in this age-group were pneumonia 8, marasmus 7, meningitis 5, worms 5, convulsions 4, gastro-enteritis and enteritis 4, bronchitis 3. Of the 36 deaths classified to these causes 16 were boys and 20 girls. There were two deaths from enteric fever, both girls; one from miliary tuberculosis, a boy; and three were ascribed to malaria, one boy and two girls.

NOTIFIABLE INFECTIOUS DISEASES.

Notifications.—The diseases notifiable under the Public Health Ordinance, Cap. 98 are diphtheria, membranous croup, typhoid or enteric fever, pulmonary tuberculosis, tuberculosis (other forms), pneumonia, ophthalmia neonatorum, chicken pox, encephalitis lethargica, acute poliomyelitis, cerebro-spinal fever, small pox, plague, cholera and yellow fever, the last four being quarantinable.

The number of cases notified to the Medical Officer of Health during the year was 363, a decline of 34 on the notifications for the previous year.

Notifications were received in respect of 7 of the 15 infectious diseases notifiable under the Ordinance. Of these diphtheria showed an increase over the record for the previous year of six notifications, enteric fever an increase of 20; pulmonary tuberculosis a decline of 18; tuberculosis (other forms) a decline of 9; pneumonia an increase of 13; ophthalmia neonatorum a decline of 6; and chicken pox a decline of 44.

There were no notifications or occurrences in the City of quarantinable disease either imported or of local origin. Table X gives details of the notifications received from month to month. The average number of cases notified for each quarter of the year was 91. In the first quarter the number was six below the average; in the second quarter it equalled the average and in the third and fourth quarters, when the rainfall exceeded that of the first half of the year by more than 16 inches, it was 5 and 2, respectively, above the average.

DEATHS FROM NOTIFIABLE INFECTIOUS DISEASES.

There was a slight increase in deaths from notifiable infectious disease, the total number being 231, compared with 223 in 1929 and an average of 239 for the preceding five years. The death-rate per 1,000 population from these diseases was 3·36, as against an average of 3·64 for the previous quinquennium. Table XI gives particulars of deaths from notifiable infectious diseases showing that there was one death each from diphtheria, encephalitis lethargica and acute anterior poliomyelitis, as against none of these in the previous year. The last mentioned case was notified in December, 1929, and died in 1930. Other increases over the preceding year were three deaths from enteric fever, and 12 from pulmonary tuberculosis. Deaths from tuberculosis (other forms) decreased by nine and pneumonia by one.

Table XII shows the distribution in the sub-districts of the City of cases of notifiable infectious diseases and deaths therefrom during the year. The proportions of cases notified and deaths from these diseases per 1,000 population are also given in respect of each sub-district.

DEATHS IN HOSPITAL FROM NOTIFIABLE INFECTIOUS DISEASES.

Two hundred and thirty one or 64·5 per cent. of the 363 cases of infectious diseases notified were treated under isolation in the Colonial Hospital before death took place. The importance of this measure of prevention especially in cases of diphtheria, enteric fever and pulmonary tuberculosis cannot be over estimated.

Table XIV compares the number of deaths in hospital and deaths at home for the several infectious diseases notified and gives the percentage of cases isolated in hospital before death for this and the preceding year.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Deaths classified under this head, including malaria, whooping cough, influenza, dysentery, ankylostomiasis, and syphilis totalled 91, and their respective numbers each month are shown in Table XV. These deaths are fewer by 37 than the number registered in this group in the preceding year. There was an increase of two in the deaths ascribed to malaria and one in the case of influenza, but there was no mortality registered from whooping cough, compared with 19 deaths in the previous year; dysentery showed a decline of 12 deaths; ankylostomiasis and syphilis also declined by three and six deaths, respectively. Thirty-six, or 39·56 per cent., of the total of 91 deaths from notifiable infectious diseases took place at the Colonial Hospital, and Table XVI shows their occurrence from month to month. For the previous year the number of these cases that died in hospital was only 32 per cent.

Table XVII compares deaths in hospital with deaths at home from non-notifiable infectious diseases and shows the percentage of deaths from diseases under this head which took place in hospital for this and the previous year.

Table XVIII shows the monthly incidence of deaths from diarrhoea and enteritis. The number of deaths registered in this group was 58, compared with 53 in the preceding year. The rate per 1,000 of the population increased from 0·79 in 1929 to 0·84 this year. Of the total of 58 deaths from diarrhoea and enteritis 32, or 55·2 per cent., were among infants under one year of age, and six, or 1·03 per cent., among the children in the age group 1-5 years. Twenty-eight cases occurred in the first two quarters of the year when the weather was abnormally dry, and 30 in the second half of the year during the moderately wet season.

PRINCIPAL INFECTIOUS DISEASES.

Pulmonary Tuberculosis.—This scourge still continues to levy the highest toll of mortality among the infectious diseases of the City. The number of victims claimed by it was 141, compared with 129 in 1929, the death-rates being, respectively, 2·05 and 1·92 per 1,000 population. In the last year the deaths had fallen to the lowest recorded number in the history of Port-of-Spain; it is not unusual for a rise in mortality to follow such an event, which may be explained by the

supposition that many terminal cases who survived the end of the previous year and produced a short crop of deaths, died in the succeeding year and increased the crop for that year. It is a hopeful sign that, notwithstanding the increased mortality, the notifications dropped from 142 in 1929 to 124 this year, a decline of 18 cases.

The campaign of education respecting the mode of spread and prevention of the disease instituted by the Association for the Prevention and Treatment of Tuberculosis is still being pursued with unabated force. The Dispensary of the Association is linked with the Tuberculosis ward of the Colonial Hospital and of the total of 124 cases of pulmonary tuberculosis notified in Port-of-Spain during the year 45, or 36·3 per cent., were Dispensary patients. Some of these and others aggregating 66 open cases of the disease, who were so housed that proper precaution could not be taken to prevent the spread of the disease, were sent to hospital for treatment under safe hygienic conditions in the Tuberculosis Ward.

Notifications, deaths and death-rates in the City from pulmonary tuberculosis are tabulated below and shown graphically in Chart "B".

PULMONARY TUBERCULOSIS.

Notifications, Deaths and Death-rates 1918-1930.

Year.							Notifications.	Total Deaths.	Death-rate per 1,000 population.
1918	..	..	..	..	..	..	299	247	3.63
1919	..	..	..	..	..	..	250	194	2.82
1920	..	..	..	..	..	..	205	185	2.65
1921	..	..	..	..	..	..	179	155	2.51
1922	..	..	..	..	..	..	190	149	2.38
1923	..	..	..	..	..	..	211	192	3.04
1924	..	..	..	..	..	..	181	162	2.53
1925	..	..	..	..	..	..	173	148	2.29
1926	..	..	..	..	..	..	172	183	2.81
1927	..	..	..	..	..	..	160	138	2.10
1928	..	..	..	..	..	..	152	141	2.13
1929	..	..	..	..	..	..	142	129	1.92
1930	..	..	..	..	..	..	124	141	2.05

Enteric Fever.—This year a rise in notifications and deaths from enteric fever was general in the Colony and Port-of-Spain participated in the event. The notifications increased to 55 from 35 in the preceding year, and the deaths from 13 to 16; the death-rate calculated from the latter figure was 0·23 per 1,000 population, as against 0·19 in 1929. Particulars of the notifications, deaths and death-rates from this disease from 1918-1930 are expressed below in a tabulated statement and graphically displayed in Chart "C".

The effect of the purification of the water supply by means of liquid chlorine on the curve of the disease from the year 1924 has been referred to in former reports and need not be repeated here, but the writer thinks it well to renew the warnings which he has given on other occasions that besides water, which must be specifically polluted, there are other important sources of enteric fever to beware of, such as the common house fly, direct or indirect contact with persons suffering from the disease—especially those treated at home, instead of in hospital, without the strict observance of proper precautions against its spread, unboiled milk, greens, shell fish and other foods derived from contaminated sources and eaten raw. Also, there is the ever present danger of typhoid carriers. These hidden vectors of the disease are particularly insidious and dangerous because it is difficult to trace them, and they are liable to spread the infection from place to place over a wide area before their ability to do so is even suspected. The writer further desires once more to strongly recommend anti-typhoid inoculation to every non-immune person as a reliable protection against infection from any of the various sources of the disease. During the year 169 injections of a mixed typhoid and para-typhoid vaccine were given by the Medical Officer of Health as a routine procedure to contacts of enteric fever cases who had not been inoculated by their own medical attendant, and this free service, it may be added, is also at the disposal of every one sufficiently alive to its great advantages to apply for it.

CHART B.
PULMONARY TUBERCULOSIS
PORT-OF- SPAIN

Notifications and Deaths.

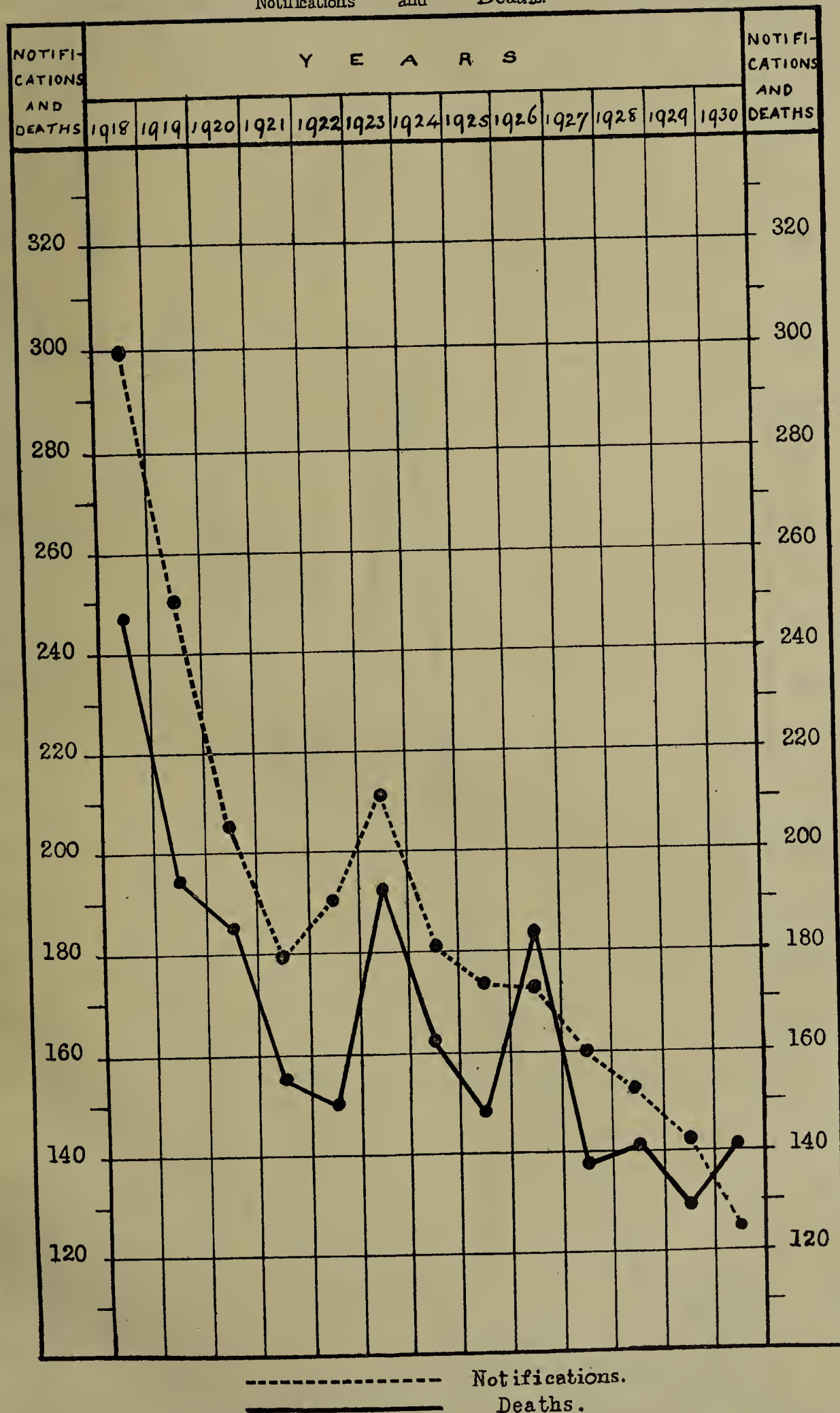
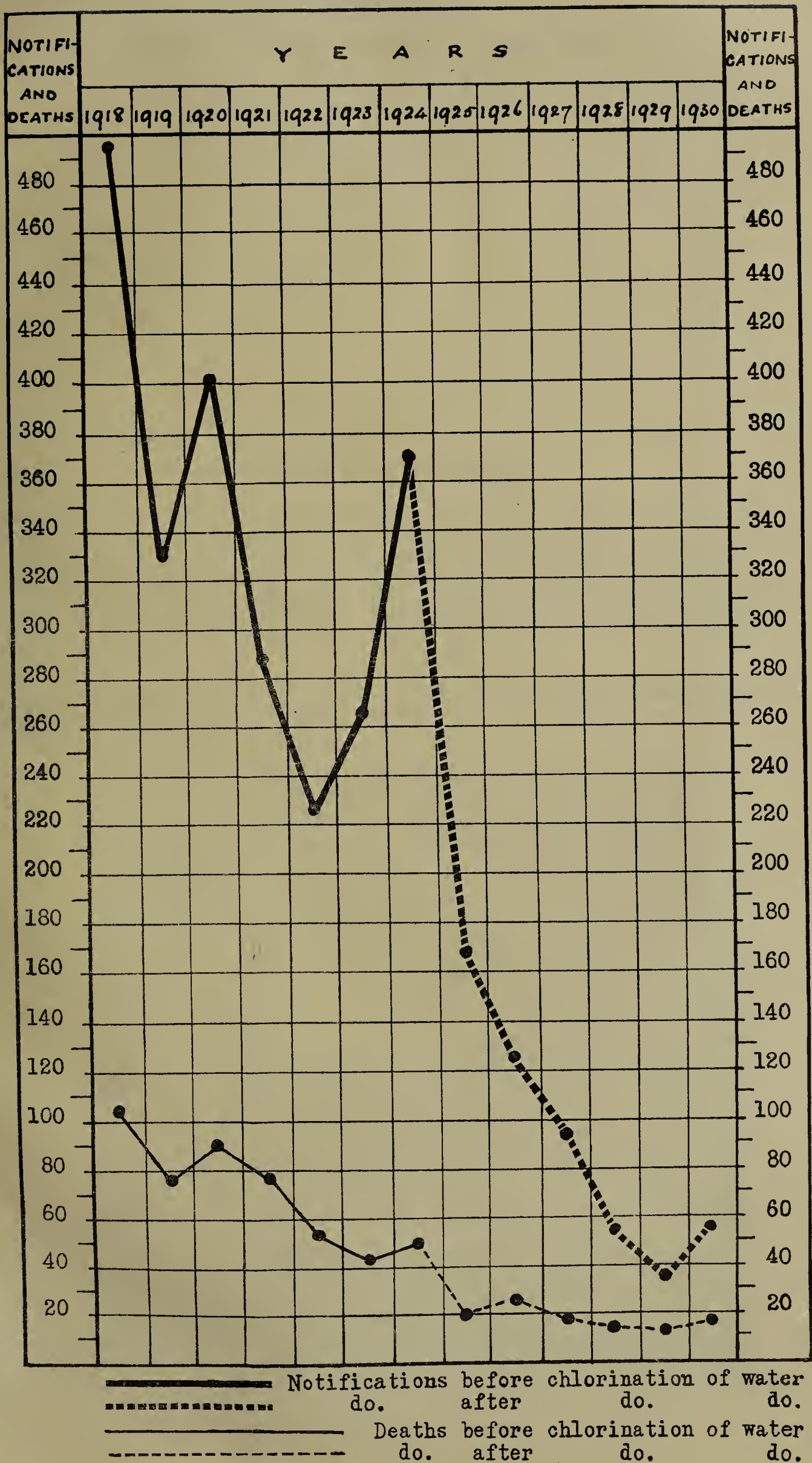


CHART C. ENTERIC FEVER IN PORT-OF-SPAIN.

Notifications and Deaths , 1918—1930.



ENTERIC FEVER.

Notifications, Deaths and Death-rates for the years 1918-1930.

Year.							Notifications.	Deaths.	Death-rate per 1,000 Population.
1918	..	..	..	..	..	..	495	104	1.52
1919	..	..	..	..	..	..	330	76	1.10
1920	..	..	..	..	..	..	401	90	1.29
1921	..	..	..	..	..	..	287	77	1.25
1922	..	..	..	..	..	..	226	53	0.84
1923	..	..	..	..	..	..	265	43	0.68
1924	..	..	..	..	..	..	370	49	0.76
1925	..	..	..	..	..	..	168	20	0.31
1926	..	..	..	..	..	..	125	26	0.39
1927	..	..	..	..	..	..	94	17	0.26
1928	..	..	..	..	..	..	54	14	0.21
1929	..	..	..	..	..	..	35	13	0.19
1930	..	..	..	..	..	..	55	16	0.23

NON-NOTIFIABLE INFECTIOUS DISEASES.

Influenza.—During the year influenza of an unusually severe and disabling type was the only communicable disease which attained epidemic proportions in the City. Nine deaths, eight of which occurred in December, were registered of that cause, but the severity of the disease was sharply reflected in deaths from bronchitis and pneumonia of which there were 13 each in December, compared with an average for that month of 7 and 3.6 respectively, for the preceding period of five years.

In view of its unusual character the following progress notes on the outbreak which were issued by the writer early in the following month of January are included here for future reference:—

“An unusual prevalence of influenza, of a mild type at first, was noticed in Port-of-Spain in the early part of November, 1930. The characteristic symptoms grew worse as the number of cases increased, and the outbreak became wide-spread about the fourth week of the month, when the writer was notified by a City firm that 15 of its employees were laid up with fever. On investigation influenza was recognized as the cause of the illness, and leaflets of preventive advice already in print were immediately distributed in the schools, and posted in shops, stores, offices, the markets, the Railway Station and other places of public resort. These leaflets were, also, kindly published by the daily and weekly newspapers without charge.

The epidemic apparently reached its peak at the beginning of the third week in December and, as a result of daily enquiries then made from the General Post Office, Customs, Railway Department and 17 large stores in Frederick Street and vicinity, it was ascertained that an aggregate of no fewer than 200 employees of these places were at that time laid up at home with the disease. At the commencement of the fourth week of the month these figures were reduced to 90, and for the corresponding period of the current month of January, 1931, there were only 7 absentees from the same cause.

The unusual severity of the epidemic is apparent from the marked rise in the mortality from respiratory diseases in December, compared with the previous records for the same month as shown in the following tabular statement, with the curious exception of deaths from pulmonary tuberculosis which, contrary to what is usual in periods of wide-spread influenza, were fewer than the average for the preceding five years.

Deaths registered from Influenza, Bronchitis, Pneumonia and Pulmonary Tuberculosis in December, 1930, compared with the corresponding record for the previous five years.

Year.	Influenza.	Bronchitis.	Pneumonia.	Pulmonary Tuberculosis.	Total.
1925 .. ..	..	8	2	10	20
1926 .. ..	..	7	4	13	24
1927 .. ..	..	12	3	10	25
1928 .. ..	..	3	3	8	14
1929	1	5	6	17	29
Total	1	35	18	58	112
Av'ge for the 5 years	0.2	7	3.6	11.6	22.4
1930	8	13	13	6	40

Below is given a weekly statement of deaths from the diseases mentioned in the preceding table, commencing from the week ended 8th November, 1930, and continued up to the week ended 3rd January, 1931.

Weekly Statement of Deaths from Influenza and Respiratory Diseases, including Pulmonary Tuberculosis.

Week ended.	Influenza.	Bronchitis.	Pneumonia.	Pulmonary Tuberculosis.	Total.
November 8 ..	..	1	..	2	3
15 ..	..	1	..	1	2
22 ..	..	1	..	3	4
29 ..	..	4	..	1	5
December 6 ..	..	2	1	..	3
13 ..	..	3	2	2	7
20 ..	1	3	1	3	8
27 ..	5	4	6	1	16
January 3 (1931)	2	1	3	1	7
Total	8	20	13	14	55

From the above table it will be seen that the highest mortality from the diseases mentioned therein took place during the week ended 27th December, that is, Christmas week. Since then these deaths have markedly declined.

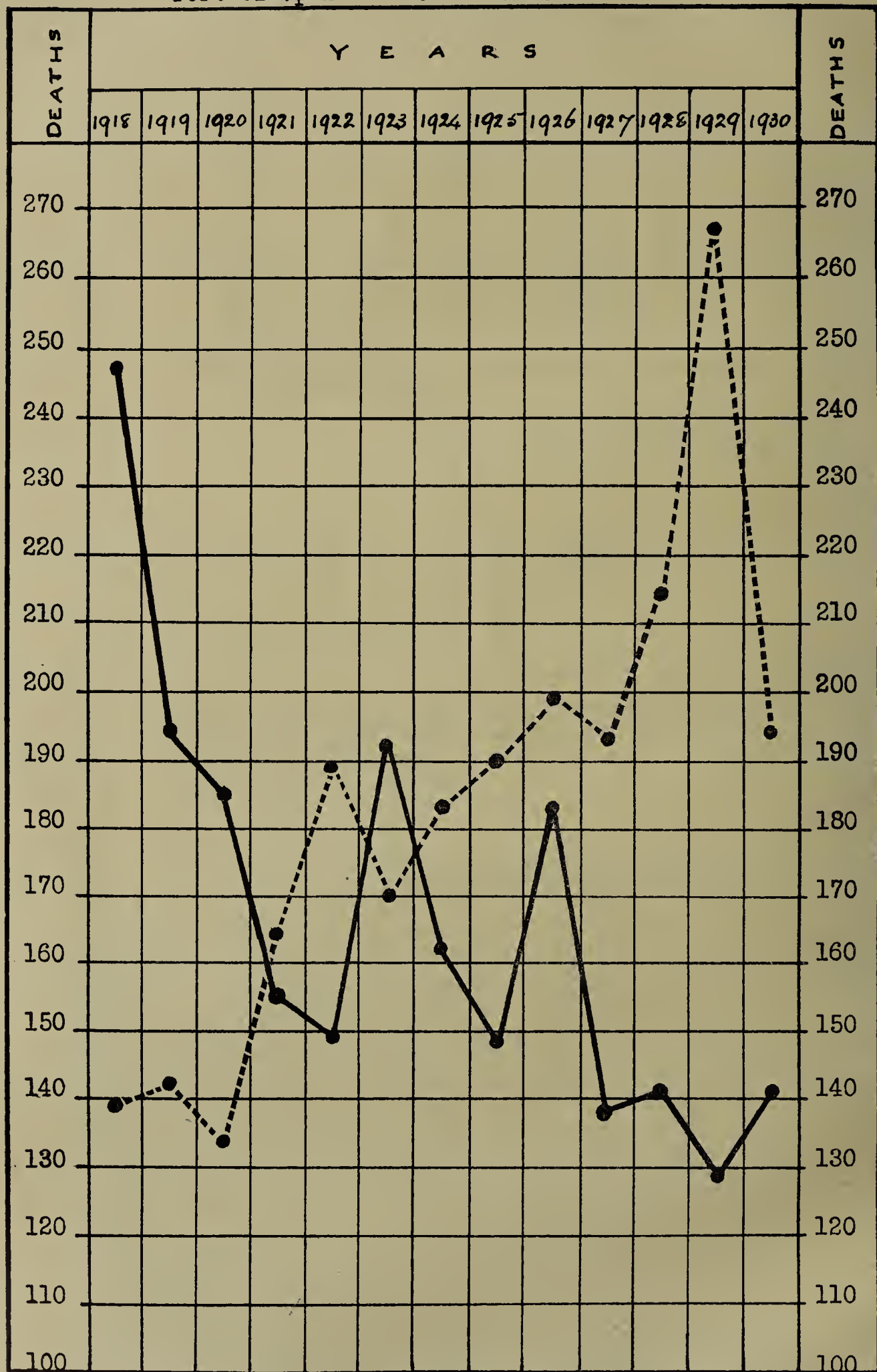
The distribution of the 55 deaths tabulated in the weekly statement was as follows:—

City 32, East Dry River 15, Belmont 6 and Woodbrook 2. There were no deaths from any cause in St. Clair during the months of November and December."

Malaria.—There were 40 deaths from this disease during the year yielding a death-rate of 0.58, compared with 38 deaths and a death-rate of 0.56 in the previous year; but the problem of preventing this disease is one involving the sanitation of neighbouring out-districts rather than a City one. In previous reports it has been stated that there are no active anopheles breeding places within the City limits and recently this contention has been upheld, after careful survey, by de Verteuil of La Brea, an experienced malariologist specially appointed by the Government for anti-malarial work in the Colony. Many persons dying in the City from the disease are found on investigation to be old febricitants whose connection with known malarial districts in the country is clearly traced. It is not unlikely that infected anopheles mosquitoes sometimes find their way in outlying parts of the City which border on rural lands, but in spite of systematic search their presence is rarely discovered. Malarial infection, therefore, except at the boundaries of the City, is to all intents and purposes a remote contingency in Port-of-Spain.

Syphilis.—Thirty deaths were ascribed to syphilis, which was a decline of six on the previous year and a reduction of the death-rate per 1,000 population from 0.53 to 0.44. Four of these deaths occurred among babies under 1 year and two were children in the 1-5 age period. The effects of parental syphilis are also shown in Tables VII and IX in the deaths registered from congenital abnormalities and other diseased conditions of infants commonly ascribed to syphilis. Many patients, both men and women in the tertiary state of the disease, believing themselves to be tuberculous, attend the Tuberculosis Dispensary for hoarseness

CHART D.
Curves of Deaths from Pulmonary Tuberculosis and Cardiac and
Vascular Diseases Contrasted.
Port-of-Spain 1918—1930.



———— Pulmonary Tuberculosis
----- Cardiac and Vascular Diseases.

resulting from syphilitic perforation of the soft palate and are sent to the venereal diseases clinic for special treatment. It has, however, been noticed by the writer after many years experience of examining applicants for fish vendor's, slaughterman's and meat salesman's licences, that the incidence of syphilis among that class of workers has markedly declined, and it is evident from this and the trend of the deaths from the disease that the work of the free venereal diseases clinic established by the Government and the support which it gives to the pre-natal activities of the Child Welfare League are bearing good fruit.

Dysentery.—This disease, principally of the amoebic type, prevailed only to a slight extent during the year. The total deaths registered under that head numbered 11, being fewer by 12 than in the previous year. Four deaths occurred in the March quarter, none in the June quarter, one in the September quarter and six in the December quarter. No mortality from this disease was recorded in six of the months of the year, namely, April, May, June, August, September and November.

Whooping Cough.—There was a complete absence of mortality from this disease which in the previous year prevailed in severe epidemic form and caused 19 deaths.

Ankylostomiasis.—As mentioned in last year's report, this disease is not a City problem. All premises within the district whether in the sewered or unsewered area are compulsorily provided with privy accommodation of a sanitary type. One death, source of infection unknown, occurred from this disease as against four in the previous year.

OTHER PRINCIPAL CAUSES OF DEATH.

Cardiac and Vascular Diseases.—The mortality classified under this head declined dramatically from 267 deaths, with a death-rate of 3.96 per 1,000 population, in 1929, to 194 deaths and a corresponding death-rate of 2.82 this year. To a certain extent an explanation of this phenomenon may be found in the fact that by the removal of the House of Refuge from the City to St. James the contributions formerly made by the aged and infirm inmates of that institution to the death-roll from diseases of the heart and blood vessels ceased at the end of the March quarter. The number of deaths which took place at the House of Refuge last year was 142, with an average for the preceding period of five years of 159; although the details have not yet been worked out it is certain that a large proportion of these deaths was due to chronic cardiac disease and arterial degeneration. It follows, therefore, that a factor for the correction of the death-rates for 1929 and 1930 must be found before the mortality allocated to cardiac and vascular diseases in these two years may be usefully compared.

At the same time, even taking the figures as they are, the striking exchange of the unenviable position of "best killer" made between pulmonary tuberculosis and the vascular group of diseases, to which reference was made in the writer's previous report, is still visible in the following tabular statement and more clearly so in Chart "D".

Comparison of Deaths and Death-rates from the two Principal Killing Diseases for the period 1918-1930.

YEAR.	CARDIAC AND VASCULAR DISEASES.		PULMONARY TUBERCULOSIS.	
	Deaths.	Death-rate per 1,000 population.	Deaths.	Death-rate per 1,000 population.
1918	139	2.04	247	3.60
1919	142	2.06	194	2.82
1920	134	1.92	185	2.65
1921	164	2.67	155	2.53
1922	189	3.03	149	2.39
1923	170	2.69	192	3.04
1924	183	2.86	162	2.53
1925	190	2.94	148	2.29
1926	199	3.06	183	2.81
1927	193	2.94	138	2.10
1928	214	3.22	141	2.08
1929	267	3.96	129	1.92
1930	194	2.82	141	2.05

Bright's Disease and Nephritis.—In 1929 there was a marked decline in the mortality classed under this head, 82 deaths having been registered therefrom, compared with 120 in 1928; but this year the corresponding deaths numbered 94, being a rise of 12 over the figures for 1929, equivalent to a death-rate of 1·37 per 1,000 population, as against 1·22 in the former year. Bright's disease and nephritis have continued to hold their usual position of third place on the list of the principal killing diseases.

Diarrhoeal Diseases.—Table XVIII shows the monthly incidence of deaths from diarrhoea and enteritis. The number of deaths registered in this group was 58, compared with 53 in the preceding year. The rate per 1,000 of the population increased from 0·79 in 1929 to 0·84 this year. Of the total of 58 deaths from diarrhoea and enteritis 32, or 55·2 per cent., were among infants under one year of age, and six, or 1·03 per cent., among children in the age group 1-5 years. Twenty-eight cases occurred in the first two quarters of the year when the weather was comparatively dry, and 30 in the second half of the year during the moderately wet season.

The curves of diarrhoeal diseases and enteric fever for the period 1918-1930 are contrasted in Chart "E".

Bronchitis.—Deaths from bronchitis declined from 77 last year with a death-rate of 1·14 per 1,000 population, to 67 this year with a corresponding rate of 0·98; the average death-rate for the five years 1925-1929 was 1·27. Notwithstanding the reduction in the number of deaths from this cause, bronchitis, as in the previous year, was responsible for the highest number of deaths in the respiratory group. Of the deaths from bronchitis in 1930, 18 were babies under one year and three were children from 1-5 years of age: the corresponding record of deaths for 1929 being 15 and 2, respectively. Death also claimed nine victims under one year from pneumonia, and eight children in the age group 1-5 succumbed to the same disease. In the previous year the infant mortality included 15 deaths from pneumonia which also took a toll of three deaths among children of 1-5 years of age.

Cancer and other Malignant Diseases.—Deaths registered under this head numbered 33, which is the lowest of the available records since the Council assumed the Public Health work in the City in 1917, as is shown in the deaths and the death-rates calculated therefrom in the following table:—

Deaths and Death-rates from Cancer in Port-of-Spain.

Year.									No. of Deaths.	Death-rate per 1,000 population.
1918	..	..	..	..	..	..	..	..	56	0·82
1919	..	..	..	..	..	..	..	..	44	0·64
1920	..	..	..	..	..	..	..	..	39	0·56
1921	..	..	..	..	..	..	..	..	39	0·63
1922	..	..	..	..	..	..	..	..	44	0·70
1923	..	..	..	..	..	..	..	..	53	0·84
1924	..	..	..	..	..	..	..	..	37	0·58
1925	..	..	..	..	..	..	..	..	39	0·60
1926	..	..	..	..	..	..	..	..	48	0·74
1927	..	..	..	..	..	..	..	..	51	0·78
1928	..	..	..	..	..	..	..	..	48	0·72
1929	..	..	..	..	..	..	..	..	53	0·79
1930	..	..	..	..	..	..	..	..	33	0·48

It is hazardous to attempt to explain the causes which may have influenced the low record of deaths from cancer in 1930, but undoubted that early diagnosis and skilled treatment are the most effective means of preventing death by cancer, and, for the benefit of many unsuspecting persons whose lives may be jeopardised

CHART E.
Curves of Deaths from Diarrhoea and Enteritis and Enteric fever
contrasted.
Port-of-Spain 1918--1930.



by delay in seeking competent medical advice, the following information, published by the American Society for the Control of Cancer cannot be too widely disseminated :—

1. Cancer begins as a small local growth which can often be safely and easily removed in the early stages by competent surgical treatment, or in certain favourable cases by radium, X-ray, or other methods.
2. The beginning of cancer is usually painless ; for this reason its onset is doubly insidious, and other danger signals must be looked for and heeded in time.
3. Cancer is not a constitutional or blood disease, and there should be no thought of disgrace or hereditary taint associated with it.
4. Cancer is not a contagious disease, and there is no danger from living in the same house or from contact with a patient.
5. In an ordinary sense, cancer is not inherited. Some Authorities believe that there may be inheritance of a certain tendency to the disease, but even this is not clearly established. The disease is so frequent that, by the very law of chance, many cases will occur in some families. Life insurance companies do not regard cancer in the family as a reason for rejecting applicants or increasing premiums.
6. A persistent lump in the breast, or continued abnormal discharge or bleeding, should take a woman to her doctor forthwith. The increased flowing which frequently occurs at the change of life is always suspicious, as is the return of flowing after it has stopped.
7. Sores, cracks, lacerations, lumps, and ulcers which do not heal, warts, moles, or birth-marks which change colour or appearance, are danger signs which demand competent medical investigation and treatment.
8. Persistent indigestion in middle life, with loss of weight and change of colour, may mean internal cancer.

II.—SANITARY CONDITIONS.

Rainfall.—The average rainfall during the year for the City gauged at St.Clair, Colonial Hospital and Constabulary Headquarters Meteorological Stations was 41.07 inches or 12.67 inches less than in the preceding year. In every quarter of the year less rain fell than in 1929, as shown in the following comparative statement :—

Quarterly Rainfall in inches.

Year.						March quarter.	June quarter.	September quarter.	December quarter.
1929	..	..	..	..	..	3.89	14.64	22.24	12.96
1930	..	..	..	..	..	2.68	9.55	16.96	11.89

The greatest drought during the year was experienced in February with 0.16 inches of rainfall, while July was the wettest month with 7.20 inches. Last year the rainfall in February, which was the driest month, was 0.97 inches and in August, the wettest month, 10.53 inches.

Details of the rainfall from month to month gauged at each of the three stations are given in Table XIX, and a corresponding record for 1929 appears in Table XX.

Milk.—Under the sale of Milk bye-laws 26 cowshed and 32 dairyman's licences were granted by the local authority in respect of cowsheds and dairies in Port-of-Spain. The corresponding figures for the previous year were 29 and 37. Of 241 milk vendor's licences 209, or 82·6 per cent., were granted in respect of tradesmen coming from out-districts, San Juan and Santa Cruz absorbing 146, or 69·8 per cent., of the total for districts outside the City limits. Similarly, of 280 badges supplied, 50 went to Port-of-Spain vendors, and the rest to the various milk-producing out-districts of which San Juan and Santa Cruz are the most important.

The situations of the dairies in respect of which milk vendor's licences were issued and badges supplied are shown in the following table :—

Milk Vendor's Licences and Badges.

Situation of Dairies.								Milk Vendor's Licences issued.	Badges supplied.
San Juan and Santa Cruz	..	..	..	..	..	..	..	146	160
Port-of-Spain	..	..	..	..	..	..	..	32	45
Maraval and Debé	..	..	..	..	..	..	..	31	38
St. James	..	..	..	..	..	..	..	23	28
Laventille	..	..	..	..	..	..	..	3	3
St. Joseph	..	..	..	..	..	..	..	2	2
Diego Martin	..	..	..	..	..	..	..	2	2
Long Circular Road	..	..	..	..	..	..	..	1	1
Four Roads	..	..	..	..	..	..	..	1	1
Total	..	..	..	..	..	..	..	241	280

As recommended in last year's report the Local Authority obtained the passage into law of an amendment of the Sale of Milk Byc-laws providing that every application for the licence of any place in the City in which cows are kept for the sale of milk shall be accompanied by a certificate from or approved by the Council's Inspector of Animals and Meat to the effect that every cow in the proposed place has within a period of six months previous to such application come from an accredited herd or been tested by the Tuberculin test without reaction. The amendment further provides that such licence shall be in accordance with a form set out in a schedule of the bye-laws and after the date of the granting thereof it shall not be lawful to bring any other cow into such licensed place without the permission in writing of the Medical Officer of Health to be granted only upon production of a like certificate as mentioned in the next preceding bye-law in respect of each such cow.

The certificate provides for the insertion of a description of each cow in a licensed cowshed so as to facilitate identification and discourage substitution.

This much needed amendment of the Sale of Milk Byc-laws will be of material assistance in improving the control of the spread of non-pulmonary forms of tuberculosis from dairy cattle.

Food.—The writer regrets that the draft byc-laws for the sanitary control of the sale of foodstuffs prepared by him under Section 156 of the Public Health Ordinance and referred to in his previous report have not yet been considered by the Special Committee to which they were committed. Much depends upon the provision of such bye-laws. For instance the attention of the local authority was drawn by two Councillors during the year to the insanitary appearance of the receptacles and carts used for the sale of ice-cream on the streets of the City and the unsightly garb of the vendors. In reply the writer was obliged to point out that the local authority had not yet acquired the necessary power to deal with such deplorable conditions, and that the byc-laws which he had submitted two years ago to regulate the sale of foodstuffs, including ice-cream and other milk preparations, had not been passed. As mentioned by the writer in last year's report there is plenty of use for these byc-laws when completed and he ventures to further express the hope that they may receive early consideration and be passed into law as approved with the least possible delay.

On the other hand the writer is glad to record that the control of the manufacture of aerated waters has been tightened in an important respect. Dealing with an application for permission to establish an aerated water factory in the City, the writer reported the intention of the applicant to make use of an insanitary type of patent bottle with dust-catching indentations at the neck and stoppered by a glass marble kept tight by a rubber washer. The space between the outer surface of the marble and the rim forms another dangerous receptacle for dust and dirt. After consideration of the matter the local authority, acting under powers contained in the Aerated Water Factory bye-laws made in that behalf, resolved that on and after the first day of September, 1931, no patent bottles, nor any other type of bottles not approved by them, will be permitted to be used in any aerated water or sweet drinks factory in the City; and that notice of this decision be given by the Medical Officer of Health to every owner of an aerated water and sweet drinks factory in Port-of-Spain.

Water Supply.—Notwithstanding the drought of this year and the continued strain on the capacity of the Bell's filters at the St. Clair station, an uninterrupted supply of potable water of a high degree of purity was delivered to consumers from the Corporation's water works. Daily samples taken from the service tap at the bacteriological laboratory tested free from *B. coli* in 50 c.c. on 350, or 96·42 per cent. of the 363 occasions on which the water was examined.

Considering the frequency with which the filters are over worked, especially in the wet season of the year, and the disadvantageous conditions under which, pending future developments, the purification of the Maraval water supply is carried out, this record may be regarded as highly satisfactory.

The writer is glad to have this opportunity of again bringing to the notice of the local authority the valuable assistance given by Dr. Pawan, the Government Bacteriologist, in connection with the maintenance of the purity of the water supply.

Drainage.—The improvements reported last year in the drainage of Woodbrook following the reconstruction and enlargement of the storm water drains in Murray Street and Ariapita Avenue have been fully maintained and there were no further complaints of flooding in that neighbourhood. The commencement of the work of paving the bed of the Dry River which took place in May marks an epoch in the history of the Sanitation of Port-of-Spain. This long deferred scheme, jointly undertaken by the Municipality and the Government, will, when completed, for all time rid the City of one of its greatest public nuisances. Consequent on reports by the writer on the insanitary conditions caused by flooding in O'Brien Place, Belmont, and Prescott Alley, Essex Place and Plaisance Road in East Dry River, notices to drain these places were by direction of the local authority served on the respective owners. Complaints of flooding in the vicinity of the Belmont Valley Road are still rife in the wet season and the writer hopes that the scheme which is under consideration for dealing with that long standing nuisance will soon mature.

Sewerage and Sewage Disposal.—The City sewerage system functioned satisfactorily during the year and the water supply necessary for this purpose was furnished without intermission in every part of the sewered area. As the supply of water available for this essential service is by no means superabundant, this careful management of the water and sewerage works deserves recognition. On the other hand, no improvement has been made in the defective system of dealing with faecal matter carried to the Mucurapo Pumping Station for disposal. The writer has already drawn attention to this nuisance in previous reports, and it has also been adversely commented upon by expert sanitarians from England who have visited the works. Although the nearest row of dwelling houses is a little remote from this offensive spot, there can be no good reason why any part of the City foreshore should be polluted with faecal matter, and not the least desirable of the effects of preventing this nuisance would be the disappearance from the slimy mud banks south of the Pumping Station of the hundreds of disgusting corbeaux which habitually feed there and whose presence tells their own filthy tale.

Removal and Disposal of House Refuse.—The compulsory provision of a metal or metal-lined dust bin, provided with an efficient cover, is strictly enforced. Except for the want of a round of the scavenger's cart on Sunday mornings in the congested portions of old Port-of-Spain, situate between Park Street and Marine Square on the north and south, and Piccadilly and Henry Streets on the east and west, the daily scavenging of the business and residential quarters of the City is very creditable to the Corporation. Cleaner streets are not to be found in any town in the West Indies, a fact which is always generally acknowledged by strangers who have toured these parts, but near the boundaries of the City in Belmont and East Dry River there is still a want of correlation between the visits of the scavengers' carts and the dumping at street corners of refuse headed down the hills by women in the employment of the Corporation, and it is not uncommon to see rubbish heaps scattered by the wind or by domestic animals before the arrival of the carts. It should not be difficult to rectify this defect in an otherwise excellent system of scavenging. The money voted by the Council for covering all putrescible refuse deposited on the western dumping ground with a layer of earth has been extremely well spent and the sanitary condition of the dump has been markedly improved. Working in conjunction with the officer in charge, a skilled sanitary inspector pays frequent visits to the dumping grounds and assists in directing the operations so that the refuse may be disposed of with as little nuisance as possible.

Taking advantage of the "Clean Up" spirit inspired by Health Week, an experiment was started in Woodbrook with the object of keeping the yards there up to Health Week standard of cleanliness all the year round. Two special assistants, in addition to the usual sanitary inspector of the district, were appointed to go round from house to house and search the yard for milk and sardine tins and other receptacles capable of holding water and breeding mosquitoes. Instead of serving an intimation notice to remove the nuisance as the ordinary inspector would do, the special man suggests to the person responsible that the tins, &c., should be collected there and then and proffers his assistance. In nearly every instance this gesture receives a ready welcome, and in a short time the rubbish is collected and placed in a conveniently accessible position near the gate for removal by the scavenger's cart. Before leaving the premises the inspector presents the occupier with a "clean up" leaflet, thousands of which were printed for the purpose. The premises are revisited about a month afterwards and if there is any further accumulation of disused cans, a report is made to the Chief Sanitary Inspector and the question of prosecution for the offence is considered. This experiment resulted in so marked an improvement in the cleanliness of Woodbrook that the writer proposes with the approval of the local authority to extend it to Belmont and East Dry River.

Housing.—As yet there is no abatement of the dangerous overcrowding which is rampant in the City, but the writer is pleased to record that some of the principal recommendations made by him in previous annual and special reports have met with approval, and there is every indication that in the coming year practical measures will be taken to provide *increased* as well as *improved* housing for the working classes under a Municipal scheme, with the approval and financial aid of the Government. What has already been achieved is described in the section dealing with general progress.

Legislation.—Ordinance No. 4 of 1930 was passed in the month of April to amend the Public Health Ordinance, Cap. 98, by repealing Section 36 of the Principal Ordinance and providing *inter alia* (1) that an owner who intends to utilize, let or lay out any area of land as building lots shall give two months notice to the local authority and submit a plan of the area of land showing the access thereto, the lay out of the streets and the course of the drains (2) for amending Section 83 of the Principal Ordinance to authorize a local authority to make bye-laws for preventing the keeping of tuberculous cows in places in which cows are kept for the sale of milk (3) for amending Section 88 of the Principal Ordinance to provide for the making of bye-laws to control the transport, storage and sale

of oysters and other shell-fish (4) for amending Section 141 of the Principal Ordinance to enable bye-laws to be made for the sufficiency of shower bath accommodation in common lodging houses and barrack yards (5) for repealing Section 142 of the Principal Ordinance and empowering the local authority, in the case of a common lodging house or barrack yard, themselves to do any work required under the provisions of any bye-law made or any nuisance notice served under the Ordinance.

General Progress.—This has been a year of progressive action in which several long considered plans for the improvement of the City and the welfare of its inhabitants have been carried into effect. The important undertaking of abolishing the age-long Dry River nuisance, which the writer easily remembers as perennially engaging consideration of the Health Authority of his school days, is an outstanding example of the enlightened policy being pursued by the Council in regard to the sanitation of Port-of-Spain. He may be pardoned for recalling that the first comprehensive report submitted by him to the local authority following his appointment as Medical Officer of Health in 1917 was on the subject of the insanitary and unsightly conditions of the bed and banks of the Dry River from Chaytor's Causeway to the Sea, with recommendations for their abatement.

Since the first sod was turned in May by His Worship the Mayor, the work of concreting the sides and bed of the river has progressed rapidly and when the whole scheme, estimated to cost £62,458—a substantial portion of which is contributed by the Government—is completed, a vast improvement will have been effected in the health conditions and amenities of Port-of-Spain.

Another achievement of general importance to the health of the City was the acquisition, as recommended in the writer's Annual Reports for 1928 and 1929, of powers by the local authority to execute the works necessary to improve the sanitary conditions of any barrack or common lodging house, as required by any bye-law made under the Public Health Ordinance or in pursuance of a nuisance notice thereunder where, by reason of poverty or other sufficient cause, the owner or keeper thereof makes default in carrying out the requirements of the bye-law or the notice, and to declare that the cost of the works shall be repayable by annual instalments within a period not exceeding 15 years. This step, which was very desirable in itself, did not, however, go far enough; for in view of the crisis which had been reached in the matter of overcrowding due to an increasing population and the large number of barracks being demolished and converted into trading establishments, the question of providing shelter for evicted tenants became a matter for urgent consideration. As a result it was resolved by the local authority to adopt a Housing Scheme for persons of the poorer class and, as a beginning, the Council, with the consent and support of the Government, approved plans for the erection of 12 Workers' Homes on a vacant site at South Quay. These houses should be ready for occupation early next year. The local authority also decided on a larger scheme whereby 200 houses will be erected in Gonzales Place, an area of 83½ acres of land owned by the Corporation in Belmont. A loan of £40,000 has been arranged for carrying out this undertaking which the Government has agreed to aid by contributing one-half of the interest on the loan.

III.—SANITARY ADMINISTRATION.

Staff.—The following are the members of the staff of the Public Health Department appointed under the Provisions of the Public Health Ordinance:—

<i>Medical Officer of Health</i>	....	GEORGE H. MASSON, M.D., C.M., D.Sc. (Public Health), F.R.C.P.E., F.R.S.E.
<i>Secretary, Local Authority</i>	....	E. PRADA, M.R.C.S.E., L.R.C.P.L.
<i>Chief Clerk to the Medical Officer of Health</i>	....	W. R. SMITH.
<i>Chief Sanitary Inspector</i>	....	CAPT. E. W. LACK, V.D.
<i>Sanitary Inspectors</i>		{ J. E. FERREIRA, CERT.R.SAN.I.
1st Grade ....	....	{ G. CHARLES.
		{ HENRY THORNE.
		{ J. W. PARRIS.
		{ F. A. HOWARD.

<i>Sanitary Inspectors</i>				{ N. GUPPY.
<i>2nd Grade</i>	....	....		{ C. ASSING.
				{ O. FORDE, ASSOC.R.SAN.I.
				{ W. G. WILLIAMS. *
<i>3rd Grade</i>	....	....		{ G. ASHE.
				{ F. BABB.
				{ T. M. MITCHELL, CERT.R.SAN.I. *
				{ J. A. WOOD.
				{ H. ST. CYR, CERT.R.SAN.I.
<i>Assistant Sanitary Inspectors</i>	....			{ J. B. TAYLOR.
				{ S. B. NURSE.
				{ A. ROMAIN.
<i>Messenger.</i>	....	....	....	T. CHRISTIAN.

Four Anti-Mosquito gangs and four rat catching gangs each working under the supervision of an overseer operate in the City ; two to four gangs of oilers according to the season of the year, are employed for spraying stagnant pools in the bed of the Dry River, the Maraval River in its course through Woodbrook and low-lying lands near the foreshore of that suburb. There are two spraymen for disinfecting premises for infectious diseases and a similar number is employed for oiling cesspits. The scavenging and cleansing of the Eastern Market is under the immediate supervision of the Chief Sanitary Inspector.

Sanitary Work.—The following is a summary of the sanitary work performed under the writer's direction and immediate supervision of the Chief Sanitary Inspector, Captain E. W. Lack, V.D.

House to House Inspection.—During the year under review 103,722 visits of inspection, equivalent to an average of 8,644 per month, were made to premises in the City, including barrack yards, private dwelling houses, shops, factories and places where offensive trades are carried on. (Table A).

Results of Notices and Verbal Directions.—The requirements of notices and verbal directions were complied with in 26,239 instances, the principal results including 5,096 yards, 2,960 drains, 1,393 sewer basins, 1,527 dustbins, 1,452 cesspits, 670 sinks, 670 washing platforms and troughs, 448 gullies, 140 urinals and lavatories cleaned ; 309 damp or swampy yards filled with earth ; 22 yards paved ; 101 yard pavements, 404 drains, 62 sinks, 18 sewer basins, 839 privies, 436 cesspits, 148 sewerage flush tanks, 615 dustbins, 100 barracks and 69 kitchens repaired ; 1,377 sanitary dustbins provided ; 894 uncovered dustbins provided with covers ; 118 new drains, 59 sinks, 231 new privies, and 187 new cesspits constructed ; 447 privies made fly-proof ; 2,111 paid for cesspits oiled ; 41 new sewer basins and 59 new flush tanks installed ; 257 accumulations of manure removed ; 581 premises cleared of bush ; 654 trees trimmed or cut down on account of excessive shade and dampness ; 249 rat holes stopped ; 50 houses ventilated ; 51 roofs close-boarded ; 75 retail shops, 23 barracks, 28 parlours painted ; 176 retail shops, 92 barracks, 24 bakehouses, 71 parlours, 11 cowsheds, 9 provision stores and 13 spirit shops cobwebbed ; 46 retail shops, 68 parlours, 35 cowsheds, and 17 bakehouses scrubbed. (Table B.)

Disinfection.—Three hundred and ninety two premises were disinfected for infectious diseases, including tuberculosis, enteric fever, pneumonia, diphtheria, chicken pox, ophthalmia neonatorum, and measles. Six hundred and twenty-one premises were sprayed with insecticide for vermin : 1,309 premises including 1,092 privies, three common lodging houses, 27 bakehouses, 13 stables, 21 kitchens, 73 barracks, 23 retail shops, 23 parlours, 4 aerated water factories, 22 cowsheds, 4 cookshops, 3 tanneries, and 1 bathroom were limewashed and 15,199 cesspits oiled free of charge for enteric fever. (Tables C, E and F.)

* Clerk to the Medical Officer of Health.

Destruction of Rats and Mice.—During the year, 7,849 rats and 1,410 mice were caught by the rat gangs and destroyed. Besides these 1,753 rats were bought. Of the total of 9,602 rats collected, 9,387 were examined by the Government Bacteriologist for plague bacilli with negative results. The remainder, being immature rats, were not examined. (Tables G and H.)

Anti-mosquito Work.—Details of work done by the anti-mosquito gangs are shown in Table J. The ladderman paid 40,133 visits to premises in the City. Defective eaves gutters were found on 1,889 occasions, defective eaves gutters containing water on 464 occasions, and defective eaves gutters containing water with mosquito larvae on 360 occasions. In 822 instances mosquito larvae were found on occupied premises in tubs, antiformicas, empty milk or sardine tins, &c., and the nuisance abated there and then.

Seventeen thousand, nine hundred and eighty-seven gallons of crude oil were used in spraying pools and swampy ground in the low-lying portions of Woodbrook, and 1,790 gallons in oiling pools in the Dry River for the purpose of preventing the breeding of mosquitoes.

Reports to Water and Sewerage Department.—Table K shows from month to month the number of leaks, defective taps, chokes and other defects noticed by sanitary inspectors in the course of their domiciliary visits and reported to the Water and Sewerage Department. The numbers totalled 1,074, or an average of 90 reports per month.

Unsound Food.—Under the provisions of the Public Health Ordinance relating to unsound food the following articles were seized and destroyed, *viz.* :— herrings 8 boxes, 1 barrel and 1 basket, Irish potatoes 40 pounds, plantains 161, peas 5 bags, honey comb 1 tray, bread 153 loaves, fish 19 pounds.

Prosecutions.—Three hundred and eighteen informations for various breaches of the Public Health Ordinance and bye-laws made thereunder were laid, and fines totalling £122 5s. 6d. were imposed by the City Magistrate. (Table L.)

The tables relating to this part of the Report appear in Appendix C.

Observance of Health Week.—As is now customary Health Week was observed in October and the following is a copy of the Special Committee's Report thereon :—

REPORT ON THE OBSERVANCE OF HEALTH WEEK IN THE CITY.

Health Week.

20TH OCTOBER, 1930.

We have the honour to submit the following report on the observance of Health Week in the City this year :—

1.—At a meeting of the City Council, sitting as the Local Authority for the City of Port-of-Spain, on the 21st August, 1930, a communication received from the Secretary to the Health Week Committee of the Royal Sanitary Institute of Great Britain was read, inviting the Council to join again, as in previous years, in the observance of Health Week during the month of October.

2.—The Council in appointing a committee, with His Worship the Mayor (the Honourable A. A. Cipriani), as Chairman, to carry out the observance of Health Week passed the following resolution :—

RESOLVED :—

- (a) That Health Week be observed in Port-of-Spain during the week commencing on Saturday the 11th October, 1930 ; and
- (b) That the following special committee be appointed to organise and carry out all necessary arrangements for the observance of Health Week :—The Mayor (*Chairman*), the Deputy-Mayor, Councillor Achong, the Town Clerk, the City Engineer, the Medical Officer of Health, and that the following persons be invited to serve on the Committee : The Surgeon-General, the Deputy Surgeon-General, Dr. J. R. Dickson, Dr. E. N. Darwent, The Honourable Dr. A. H. McShine, Dr. V. M. Metivier, the President of the Child Welfare League, the President of the Association for the prevention and treatment of Tuberculosis, the President of the Medical Board, the Director of Education, the President of the Coterie of Social Workers, and such other persons as the Committee may decide to co-opt ; and that Mr. R. L. Power of the Town Clerk's office be appointed Secretary to the Committee.

3.—The Committee met on the 28th August, 1930, when a programme was drawn up : and an Exhibition was again decided upon, the arrangements being entrusted to an organizing committee. This Committee submitted an interim report to the Council on the 18th September, 1930.

4.—It was agreed that, as usual, the chief feature of the observance of Health Week should be the holding of a Health Exhibition at the Prince's Building.

On the motion of Dr. Lassalle the Committee approved of the exhibition this year being concentrated upon—

- (a) Child Welfare ;
- (b) Typhoid Fever ;
- (c) Tuberculosis ;

and that the exhibits should comprise the following sections, of which the persons or bodies mentioned in each case would be requested to take charge :

- (1) Food Exhibits (Dr. A. Clarke) ;
- (2) Child Welfare (The League) ;
- (3) Model Dairies (Dr. H. V. Metivier) ;
- (4) Typhoid Fever Exhibits (Dr. C. F. Lassalle) ;
- (5) Tuberculosis Exhibits (Trinidad Association for the Prevention and Treatment of Tuberculosis) ;
- (6) Mosquito Exhibits (Dr. Eric de Verteuil).

It was also agreed that, as usual posters and leaflets for distribution in connection with the prevention of both typhoid fever and tuberculosis should be obtained and issued throughout the City, and particularly in the schools ; and that the usual "Cleaning Up" of yards be encouraged ; a special effort towards which, organised by Dr. Masson at Woodbrook under a specially selected officer, is proving very successful.

The Committee also decided that arrangements should be made for the giving of short addresses on suitable subjects connected with elementary hygiene, at the Prince's Building, if possible on each evening during Health Week, as well as at such other places in the City as could be arranged.

The following sub-Committees were appointed :—

- (a) An Organising and Executive Committee consisting of Dr. Masson (*Chairman*), Dr. Achong, the Town Clerk, the City Engineer, the Surgeon-General, the Deputy Surgeon-General, Honourable Dr. A. H. McShine, Dr. Dickson, Mr. Marriott and Miss Jeffers. And that Committee should be authorised to carry out all arrangements for the observance of Health Week ;
- (b) A Finance Committee : consisting of the Mayor, the Deputy-Mayor, the Town Clerk, the City Engineer and the Medical Officer of Health.

It was also agreed that the arrangements for the showing of cinematograph films in the schools and elsewhere in connection with Health Week should be left in the hands of the Deputy Surgeon-General and that the usual participation by the schools in Health Week should be arranged for by the Director of Education.

5.—In view of the importance of the fresh milk supply, it was very satisfactory to notice the evident interest displayed by all sections of visitors in the dairy stall managed by Dr. Metivier, and his assistant Dr. Shannon under the auspices of the Department of Agriculture, whose Milk Inspector, Mr. Harvey Lucas gave frequent and very interesting demonstrations. Here the processes of milking, of sterilising the milk, cleansing the bottles, maintaining the milk at a low temperature, sending it out to customers in a sanitary manner, and in fact every detail of successful dairy-work was simply and concisely explained. And at no time was there any lack of listeners to the instructions given.

6.—The Committee were pleased to be able to introduce a new feature this year by persuading Dr. H. V. Metivier to supplement his instructions by delivering a very interesting address at the Prince's Building on one evening during the week on Dairy Farming and the value of pure milk.

7.—Unfortunately it was not possible to have a dental stall : the Dental Association feeling that the interest shown in it last year was disappointing. But Dr. E. H. Farrell lectured on the "Care of the teeth" to a large audience on one evening at the Prince's Building.

8.—The section of the Exhibition managed by the Child Welfare League was an excellent effort and proved a constant centre of attraction both in the afternoons and evenings. Nurses were in attendance every afternoon and evening and gave demonstrations in the care of infants as well as brief addresses on the same subject. The special attraction of a Mother's Day, with instruction to Midwives and Nurses by Dr. V. M. Metivier, followed by the entertainment of visitors present by the League, also presented a valuable opportunity for furthering the cause of child welfare.

9.—That the teaching given in recent years on the subjects of the treatment and prevention of such diseases as tuberculosis, typhoid, malaria and hookworm, has been appreciated was evidenced by the constant attendance of groups of visitors before the sections where these diseases were dealt with, and by the intelligent interest displayed in the short talks given on their respective subjects by the officers in charge.

10.—The Committee desire to thank very sincerely the Girl Guides Association, and all those Girl Guides who on two afternoons of the week gave interesting and greatly appreciated exhibitions of singing, games, and gymnastics.

11.—The Exhibition was opened on Saturday afternoon the 11th October at 4.45 p.m. by His Excellency the Governor, Sir A. C. Hollis, K.C.M.G., in the presence of Lady Hollis, His Worship the Mayor of Port-of-Spain and a large and representative gathering of all classes of the community.

His Excellency took a keen interest in the Exhibition and went carefully around the sections, studying the various exhibits, and making inquiries of those in charge of each section.

Replying to an address of welcome by the Chairman of the Exhibition Committee, His Excellency warmly supported an appeal made by Dr. Masson for the establishment in Port-of-Spain of a permanent museum of hygiene and public health.

Throughout the week from the 11th to the 18th October, the Exhibition remained open from 4 to 6 p.m. and from 8 to 10 p.m. and was visited every day by large crowds of persons from all classes in the City. Admission was, of course, free.

12.—As customary, through the kind co-operation of the heads of several religious denominations in the City, appropriate reference to the objects of Health Week was made in the course of the sermons delivered in the different churches on the Sunday, and suitable instruction on the same subject was included in the teaching given in the Sunday Schools on that day.

13.—By the courtesy of the Honourable the Surgeon-General during Health Week, lantern slides on health subjects were shewn at Woodford Square as well as at the Royal College, St. Mary's College and St. Joseph's Convent; the Committee beg to acknowledge with gratitude, this useful assistance as well as much help untiringly rendered throughout the week by the Deputy Surgeon-General, Dr. Lassalle.

14.—Arrangements were made for the delivery of addresses and lectures to pupils of the colleges and intermediate schools, and at the Prince's Building as well as for the presence at the several stalls of persons qualified to give demonstrations on the exhibits. During the whole time that the Exhibition was open groups of visitors gathered around the stalls to listen to the explanations and instructions thus given.

15.—A new departure this year was the arranging for lectures every evening at the Prince's Building by selected lecturers. The following were the lecturers thus arranged for :—

MONDAY :—Dr. H. V. Metivier.

TUESDAY :—The Surgeon-General.

WEDNESDAY :—Dr. E. H. Farrell.

THURSDAY :—Dr. T. P. Achong.

FRIDAY :—Dr. V. M. Metivier.

16.—The Director of Education again kindly issued instructions to the head teachers of all elementary schools in the City to devote special attention to lessons on hygiene and public health during the week : and leaflets on various health subjects were distributed to the schools. In addition, a scheme similar to last year's was worked out whereby groups of teachers met every afternoon at the Prince's Building to hear short talks by Dr. Alfred Clarke on food values and vitamins.

17.—On four evenings in the week cinema films were shown by Mr. Louis Tucker, assisted by Mr. George Pollard of the Trinidad Electric Company, in Woodford Square, the subjects being the life history of the fly, and two special films on tuberculosis and the dangers of germs, kindly lent by the Surgeon-General. These shows were attended by great crowds and were much appreciated.

18.—At the rooms of the Chinese Association in Charlotte Street, addresses were delivered to a large gathering by Dr W. E. Chinasing and Dr. Peter Lai-Fook, Dr. Tito P. Achong, presiding.

At the Liberty Hall, Prince Street, addresses were delivered to members of the Workingmen's Association and the general public, by Dr. Tito P. Achong and Dr. Peter Lai-Fook, Captain A. A. Cipriani, Mayor of Port-of-Spain, presiding.

19.—Other addresses delivered in the evenings elsewhere than at the Prince's Building, included the following :—

(a) Lecture by the Surgeon-General at St. John's Hall, Pembroke Street, to the Richmond Street Debating Society ;

(b) Lecture by the Honourable Dr. A. H. McShine at the Salvation Army Hall ;

(c) Lecture by Dr. A. D. Caldeira to the Portuguese Association.

20.—During the whole week the customary "cleaning up" campaign was carried out by the City Council ; and large numbers of householders seized the opportunity to clean up their yards and place all rubbish at the gate for removal. But, as for the whole of the past year the municipality had undertaken the daily removal, not only of ordinary house and kitchen refuse, but of all other kinds of domestic and garden rubbish, free of charge, there was not as heavy a strain cast upon the scavenging department as in previous years.

21.—At the request of the teachers of several of the schools in the City, special arrangements were made to allow groups of the pupils to visit the exhibition privately during the hours when it was closed to the general public in order to afford the pupils an opportunity of receiving quiet and special instruction on the aspects of health dealt with at the various stalls.

22.—In closing this report, the Committee desire to place on record their grateful appreciation of the valuable assistance rendered by all who took part in making the exhibition in particular and the observance of Health Week, 1930, in general, the success it was ; and in particular they would thank His Excellency the Governor for performing the opening ceremony ; and Lady Hollis for gracing the occasion by her presence ; the Department of Agriculture, the Child Welfare League, the Girl Guides Association, the Inspector-General (for the kind permission for the Constabulary Band to give performances in the evenings), and to all those medical men and others who by contributing addresses or helping at the stalls, assisted the movement, and last, but by no means least, to the Press for much valuable assistance in the publication of programmes, special notices, reports of lectures and addresses, and for special articles relating to Health Week.

23.—The following is the detailed programme of the week's events :—

Programme.

Saturday, 11th October.

Opening of Health Exhibition by His Excellency the Governor at the Prince's Building, 4.45 p.m.

Clarie Wears Band at Prince's Building, 8-10 p.m.

The Exhibition this year will be concentrated upon the following subjects :—

(a) Child Welfare ;

(b) Typhoid Fever ;

(c) Tuberculosis ;

and the exhibits will be displayed in the following sections :—

(1) Food Exhibits (Dr. A. Clarke) ;

(2) Child Welfare (The League) ;

(3) Model Dairies (Dr. H. V. Metivier) ;

(4) Typhoid Fever Exhibits (Dr. C. F. Lassalle) ;

(5) Tuberculosis Exhibits (Trinidad Association for the Prevention and Treatment of Tuberculosis) ;

(6) Mosquito Exhibits (Dr. Eric de Verteuil).

Miss Jeffers has undertaken to run a "Hygienic Refreshment" stall every afternoon and evening at the Prince's Building, the net proceeds of the sales of refreshments including tea, ices, cakes, sandwiches, &c., &c., to be handed over to the Children's Breakfast Fund.

Sunday, 12th October.

References to be made to Health Week in sermons at all Churches in the City and in addresses at Sunday Schools.
 Health Exhibition open at Prince's Building, 2-6 p.m. (only).
 Health Week films at St. Joseph Convent, 5 p.m.

Monday, 13th October.

Health Exhibition at Prince's Building, 4-6 p.m. and 8.30-10 p.m.
 Address to the Pupils of Queen's Royal College by Dr. J. R. Dickson, at the College, 2.45 p.m.
 Address to School Teachers at Prince's Building by Dr. Clarke, at 3.30 p.m.
 Address by Dr. H. V. M. Metivier (Govt. Vet. Surgeon) at Prince's Building on "Pure Milk" 8 p.m.
 Cinema Exhibition, Health Week films, in Woodford Square, 8.30-10 p.m.
 Moore's Band at Prince's Building, 8.30-10 p.m.

Tuesday, 14th October.

Health Exhibition at Prince's Building, 4-6 p.m. and 8.30-10 p.m.
 Address at Prince's Building to Students of St. Mary's College by Dr. C. F. Lassalle (Deputy Surgeon-General), 2.30 p.m.
 Address to Students of St. Joseph Convent at the Convent Hall by Dr. G. H. Masson (Medical Officer of Health), 2.30 p.m.
 Address to School Teachers at Prince's Building by Dr. A. Clarke, 3.30 p.m.
 Exhibition Drill by Girl Guides at Prince's Building, 5 p.m.
 Address by the Honourable Dr. K. S. Wise (Surgeon-General), at Prince's Building, 8 p.m.
 Cinema Exhibition, Health Week films, in Woodford Square, 8.30-10 p.m.
 Clarie Wears Band at Prince's Building, 8.30-10 p.m.

Wednesday, 15th October.

Health Exhibition at Prince's Building, 4-6 p.m. and 8.30-10 p.m.
 Address to pupils of Tranquillity Boys' Intermediate School at the Prince's Building by Dr. Pearce 2 p.m.
 Address to School Teachers at Prince's Building by Dr. A. Clarke, 3.30 p.m.
 Health Week films at Queen's Royal College, 5.30 p.m.
 Address by Dr. E. H. Farrell on "Care of the Teeth" at Prince's Building, 8 p.m.
 Moore's Band at Prince's Building 8.30-10 p.m.

Thursday, 16th October.

Health Exhibition at Prince's Building, 4-6 p.m. and 8.30-10 p.m.
 Address to Senior Students of St. Joseph Convent Intermediate School and of the Bishop's High School at the Prince's Building by Dr. G. H. Masson (Medical Officer of Health), 2.30 p.m.
 Address to School Teachers at Prince's Building by Dr. A. Clarke, 3.30 p.m.
 Address to pupils of Holy Name School at the Convent Schoolroom by Dr. Boucaud (Resident Surgeon, Colonial Hospital), 2.30 p.m.
 Health Week films at St. Mary's College, 5 p.m.
 Exhibition Drill by Girl Guides at Prince's Building, 5 p.m.
 Address by Dr. T. P. Achong, at the Prince's Building, 8 p.m., on "Essentials Underlining Good Health—Food, Shelter and Environment"—(His Worship the Mayor in the Chair).
 Police Band at Prince's Building, 8.30-10 p.m.

Friday, 17th October.

Health Exhibition at Prince's Building 4-6 p.m. and 8.30-10 p.m.
 Address to pupils of Tranquillity Girls' School at Prince's Building by Dr. Edith Wharton, 2 p.m.
 Address to School Teachers at Prince's Building, 3.30 p.m.
 Lecture at Salvation Army Hall, Charlotte Street, by the Honourable Dr. A. H. McShine, 8.30 p.m.
 Address by Dr. V. M. Metivier on "Care of the Eyes" at the Prince's Building at 8 p.m.
 Lecture by Dr. A. D. Caldeira to the Portuguese Association, Richmond Street, 8.30 p.m.
 Cinema Exhibition, Health Week films, at Queen's Royal College at 5 p.m., and in Woodford Square 8.30-10 p.m.
 Address to the Chinese National Association, Charlotte Street, at 8.30 p.m., by Dr. W. E. Chinasing and Dr. Peter Lai-Fook (Dr. T. P. Achong, presiding).
 Clarie Wears Band at Prince's Building, 8.30-10 p.m.

Saturday, 18th October.

Lecture to Mothers by Dr. V. M. Metivier, under the auspices of the Child Welfare League, at the Prince's Building, 2 p.m.
 Entertainment of Mothers and Nurses by Child Welfare League at Prince's Building, 3-6 p.m., Clarie Wears Band in attendance, 3-5 p.m.
 Cinema Exhibition, Health Week films in Woodford Square, 8.30-10 p.m.
 Moore's Band at Prince's Building, 8-10 p.m.
 Health Exhibition open at Prince's Building, 8-10 p.m. *only*.
 Address by Dr. Tito P. Achong and Dr. Peter Lai-Fook, His Worship the Honourable A. A. Cipriani, Mayor of Port-of-Spain, in the Chair, at Liberty Hall (corner Duke and George Streets) to the Workingmen's Association, 8 p.m.

Reports.—The following is a list of the principal reports of the Medical Officer of Health submitted to the Local Authority during the year :—

1. Regular Reports.

Monthly.—On the Health of Port-of-Spain and the work of the Sanitary Staff	...	12
Quarterly.—On the Classification of Causes of Deaths in Port-of-Spain	...	4
Annual.—On the Vital Statistics, Sanitary Condition and Sanitary Administration of the City of Port-of-Spain for the year 1929	...	1

2. Special Reports.

Conversion of Barrack at 59, Charlotte Street into Bakehouse	...	1
Drainage of Plaisance Road and Vicinity	...	1
Drainage of O'Brien Place and lands at Essex Place and Plaisance Road	...	1
Drainage of Building Areas in Belmont Valley Road and Vicinity	...	1
Extension of time to comply with Nuisance Notice on 90, Queen Street	...	1
Flooding of Prescott Alley	...	1
Ice Cream Vendors' Carts	...	1
Insanitary Barrack at 98, St. Vincent Street	...	1
Match Factory at 5a, Sea Lots	...	2
Manufacture of Soap at 31, Valley Road	...	2
Nuisance from Trees in Woodbrook Pasture	...	1
Progress Report on the Health of the City for the 9 months ended 30th September, 1930	...	1
Sewering of area in East Dry River adjoining L'Hospice	...	1
Shortage of Housing Accommodation for persons of the Poorer Class in the City	...	1
Tuberculin testing of Dairy Cattle	...	1
Ventilation of Tobacco Factory in Fraser Street	...	2
Working hours of Rat and Ladder Gangs	...	1
Working hours of Sanitary Inspectors	...	1

3. Leases in Woodbrook.

Reports on Applications for leases of land in Woodbrook	...	80
---	-----	----

4. Building Plans.

Reports on Building Plans	...	172
---------------------------	-----	-----

5. Building alterations and repairs.

Reports on notices of alterations and repairs to buildings	...	7
--	-----	---

BYE-LAWS SUBMITTED.

Draft Bye-laws with respect to the Sale of Foodstuffs. (To Committee.)

Draft Amendments to Sale of Milk Bye-laws. (Approved.)

LEGISLATION.

Ordinances Passed.—Public Health (Amendment) Ordinance No. 4 of 1930.

Meetings.—The writer attended all the regular and special meetings of the Council and, also, a number of committee meetings.

FINANCIAL.

Financial.—The Revenue collected by the Public Health Department amounted to \$1,450.53, compared with \$1,351.24 in the preceding year, and was made up as follows :—

Revenue.

Sale of Disinfectants	...	\$ 130.65
Disinfecting Cesspits	...	741.52
Cleansing Eaves Gutters	...	9.84
Milk Badges	...	67.28
Dairyman's Licences	...	19.20
Milk Vendor's Licences	...	57.84
Oyster Vendor's Licences	...	3.84
Fines	...	405.24
Miscellaneous Receipts	...	15.12
		<hr/>
		\$1,450.53

Expenditure.

Staff	...	\$ 22,097.88
Labour	...	6,312.87
Materials, &c.	...	5,432.29
		<hr/>
		\$ 33,843.04

LEAVE OF ABSENCE.*Vacation Leave.*

J. W. Parris—Sanitary Inspector—20th January to 2nd March.
 J. E. Ferreira—Sanitary Inspector—23rd June to 3rd August.
 Dr. G. H. Masson—Medical Officer of Health—6th to 14th July.
 W. G. Williams—Sanitary Inspector—15th September to 12th October.
 W. R. Smith—Chief Clerk—22nd April to 2nd June.
 J. B. Taylor—Assistant Sanitary Inspector—3rd to 6th December.
 J. A. Wood—Sanitary Inspector—14th to 16th July.

Sick Leave.

G. Charles—Sanitary Inspector—16th to 27th April, 14th to 31st July and 26th November to 5th December.
 G. Ashe—Sanitary Inspector—20th to 26th March.

ACKNOWLEDGMENTS.

Before closing this report the writer begs to offer his sincere thanks to the Mayor, Aldermen and Councillors for the encouragement given him by the support of his recommendations in regard to the Housing Question, the control of the spread of bovine tuberculosis from milch cows and other matters of importance. He is also grateful to the Deputy Surgeon-General, Dr. Dickson, for having kindly acted for him without remuneration during his visit to British Guiana in connection with the examination of candidates for the certificates of the Royal Sanitary Institute.

In May he was privileged to receive on behalf of the local authority Dr. A. J. R. O'Brien, C.M.G., M.C., a distinguished expert in sanitation and housing from the Colonial Office, and visit with him the various City Institutions. He is indebted to Dr. O'Brien for much valuable advice and kind consideration. Lastly, to the chiefs and others of the clerical and sanitary staff whose industry and support were unfailing during the year, he is happy to acknowledge his personal obligation and commend their worthy services to the notice of the Local Authority.

I have the honour to be,

Sir,

Your obedient Servant,

GEORGE H. MASSON,
Medical Officer of Health.

Port-of-Spain, Trinidad,
 Public Health Department,
 Town Hall,
 27th April, 1931.

TABLE I.—Comparative Summary of Vital Statistics for the years 1925 to 1930.

Port-of-Spain.	1925. Population 64,535		1926. Population 65,016		1927. Population 65,573		1928. Population 66,383		1929. Population 67,356		1930. Population 68,703		Average rate for five years 1925 to 1929.
	Num- ber.	Rate per 1,000 population.	Num- ber.	Rate per 1,000 population.	Num- ber.	Rate per 1,000 population.	Num- ber.	Rate per 1,000 population.	Num- ber.	Rate per 1,000 population.	Num- ber.	Rate per 1,000 population.	
Total Births	1,820	28.20	1,833	28.20	1,753	26.73	1,868	28.14	1,895	28.13	1,935	28.16	27.88
Total Deaths	1,492	23.12	1,568	24.12	1,433	21.85	1,476	22.23	1,503	22.31	1,308	19.04	22.73
Natural increase or decrease	+328	Per 1,000 Births. 154.95	+265	Per 1,000 Births. 156.57	+320	Per 1,000 Births. 134.63	+392	Per 1,000 Births. 127.41	+392	Per 1,000 Births. 131.93	+627	Per 1,000 Births. 120.41	+339
Deaths of Infants under 1 year	282		287		236		238		250		233		141.10
Deaths from Enteric Fever	20	0.31	26	0.40	17	0.26	14	0.21	13	0.19	16	0.23	0.27
Do. Pulmonary Tuberculosis	148	2.29	183	2.81	138	2.10	141	2.08	129	1.92	141	2.05	2.24
Do. Tuberculosis (other forms)	17	0.26	17	0.26	9	0.14	19	0.29	25	0.37	16	0.23	0.26
Do. Pneumonia and Broncho-Pneumonia	63	0.98	62	0.95	41	0.63	51	0.77	56	0.83	55	0.80	0.83
Do. Diphtheria	2	0.03	1	0.02	2	0.03	3	0.05	....	....	1	0.01	0.03
Do. Encephalitis Lethargica	....	....	....	....	....	....	....	....	....	....	1	0.01	....
Do. Acute Poliomyelitis	....	....	....	....	....	....	....	....	....	....	1	0.01	....
Do. Malaria	53	0.82	67	1.03	46	0.70	57	0.86	38	0.56	40	0.58	0.79
Do. Dysentery	31	0.48	31	0.47	27	0.41	29	0.44	23	0.34	11	0.16	0.43
Do. Ankylostomiasis	7	0.11	15	0.23	8	0.12	11	0.17	4	0.06	1	0.01	0.14
Do. Syphilis	80	1.24	65	0.99	48	0.73	31	0.47	36	0.53	30	0.44	0.79
Do. Influenza	2	0.03	....	....	6	0.09	4	0.06	8	0.12	9	0.13	0.06
Do. Diarrhoea and Enteritis	71	1.10	107	1.64	48	0.73	63	0.95	53	0.79	58	0.84	1.04
Do. Bronchitis	83	1.29	79	1.21	109	1.66	71	1.07	77	1.14	67	0.98	1.27
Do. Cancer and other Malignant Diseases	39	0.60	48	0.73	51	0.78	48	0.72	53	0.79	33	0.48	0.72
Do. Cardiac and Vascular Diseases	190	2.94	199	3.06	193	2.94	214	3.22	267	3.96	194	2.82	3.22
Do. Bright's Disease and Nephritis	111	1.72	111	1.70	99	1.51	120	1.81	82	1.22	94	1.37	1.59
Still-Births	153	Per 100 Live-births 8.41	144	Per 100 Live-births. 7.85	134	Per 100 Live-births. 7.64	158	Per 100 Live-Births. 8.46	158	Per 100 Live-Births. 8.34	138	Per 100 Live-Births. 7.13	Average rate 1925 to 1929. 8.14

TABLE II.—Showing monthly Births and Birth-rates.

Months.						Males.	Females.	Both Sexes.	Birth-rate per 1,000 population.
January	..	..	..	..	..	76	81	157	26.91
February	..	..	..	..	..	59	78	137	25.99
March	..	..	..	..	..	84	99	183	31.36
April	..	..	..	..	..	87	84	171	30.28
May	..	..	..	..	..	74	77	151	25.88
June	..	..	..	..	..	87	63	150	26.56
July	..	..	..	..	..	76	71	147	25.19
August	..	..	..	..	..	60	63	123	21.08
September	..	..	..	..	..	85	83	168	29.75
October	..	..	..	..	..	98	103	201	34.45
November	..	..	..	..	..	102	88	190	33.65
December	..	..	..	..	..	76	81	157	26.91
Total	..	..	..	..	..	964	971	1,935	28.16

TABLE III.—Showing monthly Deaths and Death-rates.

Months.						Males.	Females.	Both Sexes.	Death-rate per 1,000 population.
January	..	..	..	..	..	62	73	135	23.14
February	..	..	..	..	..	59	58	117	22.20
March	..	..	..	..	..	48	59	107	18.34
April	..	..	..	..	..	55	54	109	19.30
May	..	..	..	..	..	58	57	115	19.71
June	..	..	..	..	..	55	55	110	19.48
July	..	..	..	..	..	38	41	79	13.54
August	..	..	..	..	..	59	45	104	17.82
September	..	..	..	..	..	54	49	103	18.24
October	..	..	..	..	..	49	47	96	16.45
November	..	..	..	..	..	46	45	91	16.12
December	..	..	..	..	..	73	69	142	24.34
Total	..	..	..	..	..	656	652	1,308	19.04

TABLE IV.—Deaths at different age periods.

Period.							Males.	Females.	Total both Sexes.
Under 1 year	..	..	..	..	..	..	128	105	233
1- 5 years	..	..	..	..	..	..	30	37	67
6-10 do.	..	..	..	..	..	..	6	12	18
11-15 do.	..	..	..	..	..	..	10	15	25
16-20 do.	..	..	..	..	..	..	18	28	46
21-25 do.	..	..	..	..	..	..	31	28	59
26-30 do.	..	..	..	..	..	..	38	41	79
31-35 do.	..	..	..	..	..	..	22	24	46
36-40 do.	..	..	..	..	..	..	52	33	85
41-45 do.	..	..	..	..	..	..	40	30	70
46-50 do.	..	..	..	..	..	..	43	38	81
51-55 do.	..	..	..	..	..	..	47	27	74
56-60 do.	..	..	..	..	..	..	60	43	103
Over 60 do.	..	..	..	..	..	..	131	191	322
Total	..	..	..	..	..	..	656	652	1,308

TABLE V.—Deaths of Non-residents at Colonial Hospital.

Diseases.				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Enteric Fever	..	..	..	2	..	1	..	3	..	5	2	..	1	5	1	20
Pulmonary Tuberculosis	..	..	..	2	3	7	8	10	4	7	1	4	..	4	6	56
Tuberculosis (other forms)	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	4
Pneumonia	..	..	..	..	..	1	1	2	1	..	1	1	1	1	6	15
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Other causes	..	..	..	29	27	28	24	19	21	21	11	15	8	10	21	234
Total	..	..	..	33	30	37	33	34	26	35	16	21	10	21	35	331

TABLE IX—Showing death of children from 1 to 5 years.

Deaths.							Boys.	Girls.	Total Both Sexes.
Ascariasis	..	..	..	..	..	..	..	I	I
Atrophy	..	..	..	..	..	..	I	2	3
Avitaminosis	..	..	..	..	..	..	..	I	I
Bronchitis	..	..	..	..	..	..	3	..	3
Convulsions	..	..	..	..	..	..	I	3	4
Dentition	..	..	..	..	..	..	..	I	I
Diarrhoea	..	..	..	..	..	..	I	..	I
Endocarditis	..	..	..	..	..	..	..	I	I
Enteric Fever	..	..	..	..	..	..	..	2	2
Entero Colitis	..	..	..	..	..	..	I	..	I
Gastritis	..	..	..	..	..	..	..	I	I
Gastro-Enteritis and Enteritis	..	..	..	..	..	..	I	3	4
Hydrocephalus	..	..	..	..	..	..	..	I	I
Inflammation of Intestine	..	..	..	..	..	..	I	..	I
Malaria	..	..	..	..	..	..	I	2	3
Malnutrition	..	..	..	..	..	..	2	I	3
Marasmus	..	..	..	..	..	..	3	4	7
Meningitis	..	..	..	..	..	..	2	3	5
Miliary Tuberculosis	..	..	..	..	..	..	I	..	I
Nephritis	..	..	..	..	..	..	I	I	2
Peritonitis	..	..	..	..	..	..	..	I	I
Pneumonia	..	..	..	..	..	..	3	5	8
Scalding	..	..	..	..	..	..	I	..	I
Septic Stomatitis	..	..	..	..	..	..	I	..	I
Shock due to Scalding	..	..	..	..	..	..	2	..	2
Shock—Intussusception of Small Intestine	..	..	..	..	..	..	..	I	I
Syphilis	..	..	..	..	..	..	I	I	2
Vermes	..	..	..	..	..	..	3	2	5
Total..	..	..	..	..	..	..	30	37	67

TABLE X.—Showing Infectious Diseases notified each month under Public Health Ordinance.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diphtheria	1	..	6	..	7	1	3	2	1	3	5	..	29
Enteric Fever	6	3	5	2	8	1	8	6	..	3	7	6	55
Pulmonary Tuberculosis	10	9	9	14	11	11	6	14	14	11	11	4	124
Tuberculosis (other forms) .. ..	..	2	1	1	1	..	1	1	1	1	4	1	14
Pneumonia	5	6	11	7	7	7	1	10	6	8	3	12	83
Ophthalmia Neonatorum	3	..	2	4	2	1	2	4	1	6	..	4	29
Chicken Pox	4	..	2	1	3	2	6	5	3	1	1	1	29
Total	29	20	36	29	39	23	27	42	26	33	31	28	363

TABLE XI.—Showing Deaths from Notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diphtheria .. ..	..	..	..	..	..	..	..	..	..	..	1	..	1
Enteric Fever	1	1	2	..	1	..	..	4	1	1	1	4	16
Pulmonary Tuberculosis	17	14	11	15	16	10	6	10	15	14	7	6	141
Tuberculosis (other forms)	1	1	2	1	3	1	2	2	1	..	1	1	16
Pneumonia	6	..	6	2	10	2	1	5	3	7	..	13	55
Encephalitis Lethargica .. ..	..	1	..	..	..	..	..	..	..	..	..	..	1
Acute Anterior Poliomyelitis .. ..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total	25	17	21	18	30	13	9	21	20	22	11	24	231

TABLE XII.—Distribution of Cases and Deaths from Notifiable Infectious Diseases.

Population :—	CITY PROPER. 27,972		ST. CLAIR. 1,290		EAST DRY RIVER. 16,623		BELMONT. 13,139		WOODBROOK. 9,679	
Diseases.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.
Diphtheria	10	..	1	..	4	1	9	..	5	..
Membranous Croup .. ..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	22	8	2	1	13	3	9	..	9	4
Plague .. ..	..	..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..	..
Small Pox .. ..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	68	75	..	..	27	31	21	26	8	9
Tuberculosis (other forms)	4	7	..	..	4	1	4	4	2	4
Pneumonia	46	29	..	..	24	22	8	4	5	..
Ophthalmia Neonatorum	14	..	..	..	7	..	7	..	1	..
Chicken Pox	13	..	4	..	5	..	4	..	3	..
Encephalitis Lethargica .. ..	..	..	..	..	..	1	..	..	..	..
Acute Anterior Poliomyelitis .. ..	..	..	..	..	..	..	..	1	..	..
Total	177	119	7	1	84	59	62	35	33	17
Proportion per 1,000 population	2.57	1.73	0.10	0.01	1.22	0.86	0.90	0.51	0.48	0.25

TABLE XIII.—Showing Deaths in Hospital from Notifiable Infectious Diseases.

Diseases.				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Enteric Fever	..	..	..	1	1	2	..	1	..	..	3	1	1	1	3	14
Pulmonary Tuberculosis	..	..	..	11	8	7	7	11	8	5	6	8	10	6	2	89
Tuberculosis (other forms)	..	..	..	..	..	1	1	1	1	2	1	..	..	1	..	8
Pneumonia	..	..	..	4	..	4	2	6	2	..	3	2	4	..	9	36
Encephalitis Lethargica	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total	..	..	..	16	10	14	10	19	11	7	13	11	15	9	14	149

TABLE XIV—Comparing Deaths in Hospital with Deaths at Home from Notifiable Infectious Diseases.

Diseases.				Died at Home.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentages for the year 1929.
Diphtheria	..	..	..	..	1	1	100	..
Enteric Fever	..	..	..	2	14	16	87.5	92.3
Pulmonary Tuberculosis	..	..	..	52	89	141	63.12	58.1
Tuberculosis (other forms)	..	..	..	8	8	16	50	48.0
Pneumonia	..	..	..	19	36	55	65.45	57.1
Encephalitis Lethargica	..	..	..	..	1	1	100	..
Acute Anterior Poliomyelitis	..	..	..	1	..	1	..	..
Total	..	..	..	82	149	231	64.50	58.7

TABLE XV.—Showing Deaths from Non-Notifiable Infectious Diseases.

Diseases.				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malaria	..	..	..	3	..	6	3	1	2	8	4	3	3	4	3	40
Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	1	..	..	..	..	..	..	8	9
Dysentery	..	..	..	2	1	1	..	..	..	1	..	..	3	..	3	11
Ankylostomiasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Syphilis	..	..	..	5	3	4	2	1	3	..	1	4	1	4	2	30
Total	..	..	..	10	4	11	5	3	5	9	5	7	7	8	17	91

TABLE XVI.—Showing Deaths in Hospital from Non-notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malaria	2	..	2	2	1	..	1	..	2	..	1	1	12
Whooping Cough .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza .. ..	..	..	..	..	..	..	..	..	..	..	..	1	1
Dysentery	1	..	..	..	..	..	..	..	..	1	..	1	3
Ankylostomiasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis	3	2	2	2	..	2	..	1	2	1	3	2	20
Total	6	2	4	4	1	2	1	1	4	2	4	5	36

TABLE XVII.—Comparing Deaths in Hospital with Deaths at Home from Non-notifiable Infectious Diseases.

Diseases.	Died at Home.	Died in Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentages for year 1929.
Malaria	28	12	40	30.	26.3
Whooping Cough .. ..	..	..	..	..	10.0
Influenza	8	1	9	11.11	..
Dysentery	8	3	11	27.27	26.1
Ankylostomiasis	1	..	1	..	50.0
Syphilis	10	20	30	66.66	58.3
Total	55	36	91	39.56	32.0

TABLE XVIII.—Deaths from Diarrhoea and Enteritis.

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
7	6	3	2	5	5	4	10	3	3	6	4	58

APPENDIX B.

TABLE XIX.—Monthly Rainfall from three Stations in Port-of-Spain with Average for 1930.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
St. Clair	2.70	.08	.31	2.38	1.85	6.35	7.12	4.94	5.82	6.27	2.59	4.87	45.28
Colonial Hospital	1.97	.08	.07	1.65	1.28	5.42	6.65	4.13	4.64	5.20	1.88	4.26	37.23
Constab. Headquarters	1.62	1.09	.10	2.13	1.49	6.10	7.83	4.80	4.95	4.76	1.91	3.92	40.70
Average Rainfall	2.10	.42	.16	2.05	1.54	5.96	7.20	4.62	5.14	5.41	2.13	4.35	41.07

TABLE XX—Monthly Rainfall from three Stations in Port-of-Spain with Average for 1929.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
St. Clair .. ..	.84	.84	1.78	.81	7.33	6.43	5.10	8.90	5.21	3.40	9.30	1.51	51.45
Colonial Hospital .. ..	.69	1.08	1.22	.71	5.24	5.02	7.77	8.98	4.98	2.41	8.02	.95	47.07
Constab. Headquarters	3.00	1.00	1.22	1.64	5.34	11.41	8.68	13.70	3.40	3.20	8.67	1.45	62.71
Average Rainfall	1.51	.97	1.41	1.05	5.97	7.62	7.18	10.53	4.53	3.00	8.66	1.30	53.74

APPENDIX C.—SANITARY WORK.

TABLE A.—Inspection of Premises, &c., by Sanitary Inspectors.

MONTHS.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Visits to dwelling houses and other premises..	8,798	7,874	8,253	8,881	10,697	8,695	9,621	8,238	8,339	7,767	8,019	8,540	103,722
No. of Shops, Stores, Bakehouses, &c., inspected.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Average per month.
Provision and Meat Shops	190	154	168	178	133	152	170	137	151	173	201	106	159
Provision Stores	27	27	27	26	27	27	27	27	27	35	27	30	29
Restaurants and Cookshops	27	22	31	28	69	19	31	28	23	21	16	15	28
Common Lodging Houses	9	10	16	16	16	15	15	13	13	14	13	12	14
Dairies and Cowsheds	34	30	63	38	28	28	27	29	27	28	30	27	32
Stables	53	47	73	64	48	55	51	38	43	42	37	42	49
Schools	25	25	32	27	26	32	22	22	32	24	29	32	27
Dyeworks	4	6	5	5	5	5	6	5	6	6	6	5	5
Barber Shops	24	17	30	31	59	18	29	29	23	30	21	18	27
Aerated Water Factories	12	9	9	10	20	7	10	11	9	11	12	11	11
Other Factories	15	14	16	21	47	15	14	12	16	19	16	12	18
Cake and Ice Cream Shops	180	153	173	168	124	144	170	121	156	178	136	150	154
Fish Hawkers' Trays	96	119	107	144	170	148	168	113	124	113	122	172	133
Bakehouses	46	43	71	41	42	42	43	38	38	42	31	35	43
Bread Depots	4	6	5	5	6	5	5	5	5	5	6	1	5
Ice Cream Carts and Pails	21	18	60	36	46	20	43	21	23	49	34	50	35
Cake and other Food Hucksters' Trays	23	51	29	58	48	64	54	25	44	37	44	57	45

TABLE A.—Inspection of Premises, &c., by Sanitary Inspectors.—Continued.

No. of Shops, Stores, Bakehouses, &c., inspected.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Average per month.
Provision Trays and Baskets	26	24	82	13	26	27	15	3	21	20	12	78	29
Soap Factories	2	1	2	2	1	1	1	1	1	1	1	1	1
Goat Pens	33	29	45	36	42	47	41	36	47	36	38	44	40
Plantain Carts	25	20	22	24	30	22	26	17	15	18	16	26	22
Bread Carts and Baskets	28	18	24	23	57	22	33	21	18	16	18	31	26
Boats	19	12	41	38	33	46	50	39	35	49	30	14	34
Spirit Shops	32	30	31	31	30	31	34	40	32	32	28	29	32
Fry Shops	18	13	15	12	23	15	13	10	13	12	10	12	14
Hotels	7	11	9	20	22	9	10	12	11	11	11	11	12
Markets	4	3	4	4	4	3	4	4	4	4	4	4	4
Laundries	15	13	16	12	12	14	15	18	12	12	13	11	14
Tanneries	10	10	8	9	12	3	11	11	11	11	11	16	10
Garages	72	17	21	74	75	71	72	73	73	73	72	72	64
Sweet Drinks Carts	33	41	37	41	44	45	43	24	19	13	23	38	33
Public Urinals	8	17	17	13	11	11	12	10	12	12	16	12	13
Oyster Vendors' Baskets	..	..	7	5	5	2	3	12	3	6	..	4	4
Milk Vendors' Utensils	..	..	22	..	..	..	..	..	..	..	..	..	2
Breakfast Sheds	..	..	..	..	1	..	..	..	..	..	..	..	1

TABLE B.—Results of Notices and Verbal Directions.

Yards paved	22	Barracks painted	23
Yard pavements repaired .. .	101	Retail Shops painted	75
Damp or swampy yards filled in ..	309	Parlours painted	28
Yards cleaned	5,696	Spirit Shops painted	7
Drains constructed	118	Restaurants painted	1
Drains repaired	404	Hotels painted	1
Drains cleaned	2,960	Bread Carts painted	2
Washing Troughs cleaned	175	Concrete floor of Shops repaired ..	10
Washing Platforms cleaned	495	Concrete floor of Parlours repaired ..	5
Sinks cleaned	670	Concrete floor of Cowsheds repaired ..	5
Sinks constructed	59	Concrete floor of Stables repaired ..	3
Sinks repaired	62	Concrete floor of Bakehouses repaired ..	5
Gullies cleaned	448	Concrete floor of Bathrooms repaired ..	10
Lavatories cleaned	18	Washing Platforms repaired	1
Sewer Basins cleaned	1,393	Milk Rooms repaired	2
Sewer Basins repaired	18	Bread Carts repaired	3
Sewer Basins installed	41	Cowsheds repaired	1
Flush Tanks installed	59	Milk Rooms constructed	2
Flush Tanks repaired	148	Retail Shops cobwebbed	176
Privies repaired	839	Barracks cobwebbed	92
Privies made fly-proof	447	Bakehouses cobwebbed	24
New Privies built	231	Parlours cobwebbed	71
New Cesspits constructed	187	Cookshops cobwebbed	1
Cesspits repaired	436	Cowsheds cobwebbed	11
Cesspits emptied	1,452	Stables cobwebbed	9
Cesspits oiled (paid for)	2,111	Provision Stores cobwebbed	9
Urinals cleaned	122	Spirit Shops cobwebbed	13
Accumulations of manure removed ..	257	Retail Shops scrubbed	46
Rat holes stopped	249	Parlours scrubbed	68
Sanitary Dustbins provided	1,377	Barber Shops scrubbed	1
Dustbins repaired	615	Spirit Shops scrubbed	17
Dustbins cleaned and disinfected ..	1,527	Restaurants scrubbed	3
Uncovered Dustbins covered	894	Stables scrubbed	15
Barracks repaired	100	Cowsheds scrubbed	35
Kitchens repaired	69	Bakehouses scrubbed	17
Trees trimmed or cut down	654	Aerated Water Factories scrubbed ..	3
Premises cleared of bush	581	Bath rooms provided	1
Houses ventilated	50		
Roofs closeboarded	51		26,239

DISINFECTION.

TABLE C.—Premises disinfected for Infectious Diseases and Vermin.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Tuberculosis	16	15	14	14	14	10	12	16	13	10	10	9	153
Enteric Fever	6	4	5	4	12	4	5	8	3	9	7	6	73
Pneumonia	5	5	8	7	8	7	4	8	4	6	2	15	79
Diphtheria	5	3	3	3	7	1	3	2	..	2	4	1	34
Leprosy .. ..	..	..	..	2	2	1	3	1	..	..	..	..	9
Chicken Pox	2	..	1	1	3	2	4	4	4	..	..	1	22
Measles	1	..	..	..	..	..	..	..	..	..	..	..	1
Ophthalmia Neonatorum ..	..	..	3	5	1	1	..	..	5	2	1	3	21
Encephalitis Lethargica ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Anterior Poleomyelitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Infectious Diseases ..	35	27	34	36	47	26	31	39	29	29	24	35	392
Vermin (Common Lodging Houses) ..	60	56	55	55	48	48	56	51	57	37	51	47	621

TABLE D.—Railway Coaches Disinfected.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Yaws .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Leprosy	2	3	5	2	3	5	3	2	2	3	2	1	33
Tuberculosis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE E.—Cesspits sprayed with Crude and Distillate Oil (Free for Infectious Disease).

Disease.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Enteric Fever	1,186	1,190	1,264	1,661	1,829	993	1,374	1,072	1,448	1,226	543	1,413	15,199

TABLE F.—Limewashing.

Premises and places limewashed.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Common Lodging Houses ..	2	..	..	..	..	..	..	..	..	..	..	1	3
Privies	80	96	83	89	146	75	78	75	85	127	77	81	1,092
Cookshops .. ..	..	..	..	..	..	..	..	..	..	..	..	4	4
Tanneries .. ..	..	..	2	..	..	..	..	..	..	..	1	..	3
Cowsheds	1	..	7	5	3	3	..	..	..	1	..	2	22
Bathrooms .. ..	..	..	..	..	..	..	..	..	..	..	..	1	1
Bakehouses	3	..	4	3	3	2	2	..	2	..	3	5	27
Kitchens	2	1	4	1	6	3	..	..	1	..	2	1	21
Barracks	6	3	5	4	12	6	1	..	1	3	14	18	73
Retail Shops	1	..	..	..	..	..	..	..	..	..	3	19	23
Parlours	2	..	..	..	..	1	..	..	..	..	5	15	23
Aerated Water Factories ..	..	1	..	1	..	..	..	..	..	2	..	..	4
Stables .. ..	..	..	4	2	2	3	..	..	..	2	..	..	13
Total	97	101	109	105	172	93	81	75	89	135	105	147	1,309

ANTI-PLAGUE MEASURES.

TABLE G.—Destruction of Rats and Mice.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Rats caught by Gangs	604	536	628	755	939	721	784	771	663	561	439	448	7,849
Rats bought	105	121	118	108	170	140	284	144	166	162	148	87	1,753
Total rats destroyed	709	657	746	863	1,109	861	1,068	915	829	723	587	535	9,602
Mice caught and destroyed	136	115	123	127	117	100	133	125	117	150	98	69	1,410

TABLE H.—Examination of Rats by Government Bacteriologist.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Rats examined for Plague	706	648	746	851	1,102	846	1,005	851	794	716	587	535	9,387
Rats found infected with Plague	..	..	..	..	..	..	..	..	..	..	..	..	..
Immature rats not examined	3	9	..	12	7	15	63	64	35	7	..	..	215

ANTI-MOSQUITO WORK.

TABLE J.—Inspection of Eaves Gutters, &c.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Number of inspections and re-inspections of premises	3,685	3,459	3,185	3,341	3,813	3,000	3,506	3,184	3,273	3,210	3,367	3,110	40,133
Occasions found in good order	3,441	3,321	3,094	3,172	3,658	2,789	3,200	3,021	3,166	3,085	3,282	3,015	38,244
Defective Eaves Gutters	244	138	91	169	155	211	306	163	107	125	85	95	1,889
Defective Eaves Gutters containing water	46	17	4	50	57	67	39	36	41	39	27	41	464
Defective Eaves Gutters containing water with larvae	56	7	1	6	5	18	77	67	41	36	14	32	360
Occasions on which mosquito larvae were found in tubs, antiformicas, tin cans, &c.	48	25	25	29	29	57	118	129	111	75	64	112	822

TABLE K.—Reports to Water and Sewerage Department.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Leaks, defective taps, chokes, &c., reported	98	86	94	101	112	97	93	63	97	90	70	73	1,974

TABLE L.—Cases determined by the City Magistrate and penalties imposed.

Offences.	January.			February.			March.			April.			May.			June.			July.			August.			September.			October.			November.			December.			Totals.														
	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Cases.	Fines.	£ s. d.	Total Cases.	Total Fines.	£ s. d.															
Keeping stagnant water in anti-formicas, &c.	3	17	6	3	17	6	5	1	10	0	5	1	15	0	1	7	6	1	5	0	32	21	5	0	53	27	5	0	60	20	10	0	18	5	7	6	7	1	15	0	9	4	0	197	85	15	0				
Failing to keep yard free of rubbish, tins, &c.	1	7	6	3	15	0	2	1	0	0	3	1	10	0	3	7	6	10	2	0	0	5	2	2	6	27	8	2	6							
Failing to comply with notices requiring abatement of nuisances ...	1	10	0	1	15	0	1	1	0	0	2	1	0	0	...	1	1	0	0	1	5	0	2	1	0	0	9	5	10	0								
Exposing foodstuffs for sale without protection from contamination	2	1	10	0	1	10	0	3	2	0	0							
Failing to maintain sewer basins clean	1	10	0	3	10	0	2	10	0	6	1	10	0								
Failing to provide proper dustbins	1	10	0	3	1	10	0	1	7	6	29	3	12	6	2	10	0	2	5	0	1	Reprimanded	...	39	6	15	0							
Failing to keep dustbins in good repair	1	2	6	2	15	0	3	17	6								
Hawking milk without carrying badges	3	7	6	3	15	0	2	2	6	1	10	0	3	7	6	2	2	0	14	2	4	6							
Exposing milk to contamination by milking cows in unclean cowshed	1	1	0	0	1	1	0	0						
Exposing cakes for sale not protected from contamination	4	1	7	6	1	2	0	0	1	2	6	6	3	10	0						
Failing to keep dustbins covered	3	10	0	6	6	0	9	16	0							
Failing to provide receptacle for storing house refuse	1	5	0	1	5	0							
Selling unsound fish	1	3	0	0	1	1	0	0	2	4	0	0						
Obstructing Sanitary Inspector whilst in discharge of his duties	1	Reprimanded	...	1									
Total ...	5	1	15	0	7	3	12	6	19	6	12	6	10	4	10	0	9	3	12	6	4	15	0	67	30	17	6	63	30	7	6	76	22	18	0	18	5	7	6	20	4	5	0	20	7	12	6	318	122	5	6

